Welsh Emergency Care Access Collaborative

Final Report
April 2004 - March 2006
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Acknowledgements
We would like to acknowledge in particular the support from:

- Individuals and organisations who work in the field of Emergency and Unscheduled Care and all those who were involved in the Welsh Emergency Care Access Collaborative
- Rob Hemmings, Management Consultant
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Design: Ridler Webster Limited, Swansea
October 2006
Executive Summary

The Welsh Emergency Care Access Collaborative (WECAC) was developed to improve access to emergency care and to support the Service and Financial Framework (SaFF) emergency care access targets in particular the requirement to ensure 95% of all attendances to Emergency Departments (EDs) were admitted, transferred or discharged within four hours of arrival.

WECAC was based on a collaboration method pioneered in the USA by the Institute of Healthcare Improvement and the programme introduced participants to new ways of thinking about and managing the patient journey. Each health community recruited a programme manager and over 436 improvement cycles were undertaken. Stakeholders were unanimously positive to the programme and the methods introduced continue to be utilised following completion of the Collaborative. Demonstrable improvements occurred as a result of WECAC, achieved primarily through the excellent engagement, initiatives and delivery of the programme objectives within each local health community. Sustainable changes were produced and participants were open to change as demonstrated by their innovative thinking. Front line staff were key to success, with support from senior management. Some excellent examples of leadership support included Chief Executives of Trusts regularly visiting EDs asking staff about their experiences and offering support, and senior teams managing the process to fully understand the issues first hand. The usefulness of this approach can be seen by the commitment of those involved. All health communities participated in Phase 1 (implementation) of the programme which was fully funded and all but one continued with Phase 2, which was unfunded within local communities.

The overarching goal of the Collaborative was to improve emergency care access for patients in Wales. The Collaborative set national outcome measures, related to local service delivery. The measures centred on structure (networks), process (SaFF targets) and outcome (clinical standards) and reflected the strategic agenda of emergency care access in Wales. There was variable success demonstrated in these areas, due to difficulties in collecting data.

The programme demonstrated real quantitative and qualitative achievements which ranged from improved patient care, high satisfaction and confidence in the process reported amongst staff to greater interaction and sharing of ideas within and between health communities. Front line staff were vital and enthusiastic contributors. They felt engaged, empowered and more effective as a result of the programme.

‘Working in teams really helped to empower staff and focus the work that was ongoing and gave everyone a sense of achievement when we made progress and achieved the agreed targets’
By the end of the Collaborative, 84,500 more patients per annum were being seen within the four hour target (an increase of 12.7%). This target was challenging because of the significant increases in patients presenting at EDs (8%) and structural and contractual changes within the service during the two years of the programme. The national performance improved from 88% to 92% and has been sustained above 90% since June 2005. Prior to the Collaborative, 90% had only been achieved on three occasions.

While the 95% target has not been met in all areas during this programme, the analysis suggests that, if improvement continues at the rate shown during the programme, this target could successfully be achieved by 2008.

At the end of the Collaborative there were 1,400 (9%) fewer patients per annum waiting in ED for more than eight hours.

Sustainability was one of the major goals of this programme. A significant number of communities remain committed to the principles of the Collaborative and are actively facilitating staff in their efforts to continue. 87% of local communities reported that their steering groups will remain functioning after the programme finished. 67% of programme managers were promoted to permanent positions, the experience obtained through managing this project having increased their versatility and value within their organisations.

This two year programme led to significant and sustained improvements in health care delivery across the service and achieved notable successes including:

- Improved patient care and improvement in the journey of the emergency patient with a reduction in time spent in the emergency department.
- Understanding the key issues and solutions in emergency care are to be found across the whole of the healthcare community.
- Understanding of the importance of the patient through bottom up and top down approaches.
- Statistically significant and sustained improvement in four hour performance in EDs despite an 8% growth in emergency attendances.
- Greater clarity, understanding and utilisation of information and data.
- Over 460 staff from NHS Wales and its partners exposed to and involved in change methodology through events and WECAC related work.
- Empowerment of front line staff to challenge and initiate change and improvements.
- Small cycle improvement changes leading to organisational change.

- Improvements embedded in every day practice.

- Development of key individuals (programme managers), who have progressed their careers to the benefit of their organisations.

- Improved communication and understanding between and within healthcare communities.

- Helped to direct future development needs of individuals and teams.

- Development of robust emergency area networks.

Emergency care improvements require whole system change with inter agency as well as cross boundary working. This programme has encouraged dialogue, shared best practice, and developed trust and respect with colleagues across the spectrum. Local health communities continue to encourage their staff to question and improve processes from assessment to discharge. This shows the dedication and openness of local health communities. This is not an easy model to manage but improvements in emergency care show how effective this style of working can be. This work challenges all employees to think more broadly, test assumptions and to share information. This can only be successful with supportive leadership, continuous networking across boundaries and encouragement throughout the organisations. The excellent work of local health communities in achieving these results should be recognised and supported.

This report records these achievements, celebrates the success and provides a firm basis for further developments through the Unscheduled and Emergency Care Programme, Delivering Emergency Care and related initiatives in Wales.
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Introduction

The Welsh Emergency Care Access Collaborative (WECAC) was an eighteen month programme (Phase 1) which commenced in April 2004 and subsequently had a six month extension (Phase 2). The programme was delivered by the National Leadership and Innovation Agency for Healthcare (NLIAH), previously Innovations in Care, and sponsored by the Welsh Assembly Government.

The drivers for the programme included an increasing recognition that EDs were becoming overwhelmed with attendances and an inability to process patients in a timely fashion, with increasing numbers of patients remaining for long periods in EDs due to a perceived lack of inpatient capacity.

The Collaborative was a multi-organisational national programme which was designed to reduce delays across the whole emergency care access system and to support the Service and Financial Framework (SaFF) emergency care access targets, in particular that 95% of all attendances were admitted, transferred or discharged within four hours of arrival at EDs.

The overarching goal of the Collaborative was to improve emergency care access for patients in Wales. The Collaborative therefore had a set of national outcome measures, or goals that related to local service delivery. The measures centred on structure, process and outcome and reflected the national strategic agenda of emergency care access in Wales at that time.

Health communities were required to develop local measures based on the detailed root cause analysis of current activity and “intelligence”. Teams were advised to ensure the project work was based on measurement as opposed to anecdotal feedback and were provided with tools to measure and review performance.

The purpose of the overall programme measures was to tie in the improvement work of front line teams to operational targets. These measures were fixed and were the same for every site involved in the Collaborative.

Collaborative Context
The Collaborative Programme method originates from the work of the Institute for Healthcare Improvement (IHI) in the USA. The IHI developed a concept called the “Breakthrough Series” to help health care organisations make improvements in quality whilst reducing costs. The Breakthrough Series was designed to help organisations close that gap by creating a structure in which interested organisations could easily learn from each other and from recognised experts in topic areas where they wanted to make improvements.
Ovretveit (2002) stated the purpose of a Collaborative was to:

1. achieve a rapid measurable improvement in patient care or support services in a short time (8-18 months) and to maintain this improvement
2. close the gap between everyday and best practice or performance
3. spread ideas for improvement across participating teams
4. change permanently the culture and attitudes in the participating teams and their units towards making change and using quality methods
5. spread ideas for improvement and use of quality methods to other units within their organisation, and/or to other organisations.

A Collaborative Programme is a time-limited programme focusing on change but improvements need to be sustained and the thinking and experiences spread to others in the NHS. Planning for sustainability is built within the Programme. Collaboratives can focus on specific topic areas such as cancer, access, mental health, primary care or coronary heart disease and as in this case, emergency care access.

The Programme method supports participating improvement teams in implementing change by creating the time and opportunity to reflect and discuss. Improvement teams then use a method of continuous improvement in which ideas for change are tested on a small scale. Results are analysed and either implemented or further refinements made to make the changes more effective. Alternatively, what initially was thought to be a solution may not be and after small scale testing the team may decide to look for a different idea. Changes are of an incremental nature but the increments are very fast and expected to progress rapidly to wider and bigger change.

The Collaborative goes on to actively encourage spread and adoption to multiple settings.

The key levers that support participating teams in a Collaborative Programme to generate the conditions for change are:

- looking at the service from the patients point of view
- dedicating time to an improvement programme
- creating opportunities for personal and team development and training
- providing opportunities for multi-disciplinary team working and networking
- empowering staff to make changes
- actions which meet the needs of the particular health community - “local solutions to local problems”

Collaboratives often run in three stages over eighteen months as detailed below, although a fourth stage is necessary to ensure continuous sustained improvement and networking.

**Figure 1: Stages of the Collaborative process**

- **Initiation**: 4 months
- **Recruitment and diagnostic phase**: 14 months
- **Implementation**: ongoing sustained improvement
- **After the Collaborative**
National Structure
The Collaborative was led by a full time programme manager supported by a national clinical lead. A national steering group established the direction for the Programme and included key members of the Welsh Assembly Government and professional organisations including representation from the Royal Colleges of Physicians, Surgeons, Paediatrics, General Practitioners, Nursing and NHS Direct. Terms of reference are appended (appendix one).

Each of the fourteen areas were required to work across its local health and social care community on three patient flows, or project groups. Improvements made across the three groups then combined to achieve improvement across the emergency care system.

In contrast to the Emergency Services Collaborative in England which was focused on Acute Trusts, WECAC had three work streams:

1. Primary Care - Patients who access emergency care within the community
2. Emergency Departments - Patients attending EDs, including minor and major flows
3. Acute Assessment - Patients attending secondary care for acute assessment of medical/surgical conditions and sub specialties such as orthopaedics and gynaecology, depending on the local profile.

Local Structure
Full time programme managers and clinical leads (sessional) were appointed for each health community. A project board was established in each local health community (usually based within the acute Trust), in order for the Collaborative to take forward both the local and Collaborative strategic agendas in emergency care access. Each health community was required to develop three service improvement teams to focus on each of the three work streams. Recommendations for the structure of such teams included clinical and managerial leads (or facilitators) for that patient group (figure 2).

Figure 2: Local Collaborative structures

![Diagram of Local Collaborative structures]

- Clinical Lead
- Programme Manager
- Clinical Lead, Primary Care
  - Programme Facilitator
  - Team
- Clinical Lead, Emergency Department
  - Programme Facilitator
  - Team
- Clinical Lead, Acute Assessment
  - Programme Facilitator
  - Team
Methods

WECAC was the first health and social care Collaborative in Wales. All acute Trusts in Wales actively engaged in the Collaborative together with the Ambulance Trust, Social Services, Primary Care, NHS Direct and Local Health Boards.

Each health community (12) and the Welsh Ambulance Service Trust were allocated a total of £135,000 for the Collaborative, £90,000 in year one and £45,000 for year two. NHS Direct received a total of £80,000. The funding was intended to provide protected project management time and support the appointment of a data analyst and clinical lead sessions. A number of health communities experienced recruitment delays and it was agreed to extend the Collaborative until March 2006, to support sites to sustain and embed good practice. Phase 2 of the Collaborative was unfunded locally, however, all but one health community chose to continue to participate.

Local structures were based in acute care but the programme and emergency networks allowed cross boundary issues to be taken into account. A thorough and detailed diagnostic exercise was undertaken to establish baseline information with regards to flow, to capture good practice and introduce audit mechanisms. This identified weaknesses in measurement systems, which still require further attention.

Action plans were developed by staff to enable the organisations to address specific issues. This also allowed organisations to focus project work and “Plan Do Study Act” (PDSA) cycles for small scale, high volume change, thereby giving greater opportunity for improvement.

Qualitative and quantitative methods were required to achieve a depth of understanding and provide context for individual plans for improvement. This was contingent on the circumstances prevailing at that moment in time. WECAC created a forum to identify common themes, such as understanding that demand for services is predictable but not even and hence requires proactive understanding and actions to cater for peaks and troughs in demand.

Some of the key tools used are outlined in table 1:
<table>
<thead>
<tr>
<th>Quality Method</th>
<th>Quantitative</th>
<th>Qualitative</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Amplification &amp; Run Charts</td>
<td>✔</td>
<td>✘</td>
<td>To understand the range of variability in demand around the average and help understand common and special cause variation. Usually used in conjunction with available capacity.</td>
</tr>
<tr>
<td>7-day ED Analysis</td>
<td>✔</td>
<td>✘</td>
<td>Builds a data based activity profile of the EDs flow of patients. Provides information on where to apply improvement approaches.</td>
</tr>
<tr>
<td>7-day Flow Analysis</td>
<td>✔</td>
<td>✘</td>
<td>Flow of emergency and elective streams to understand delivery and interventions required to match capacity.</td>
</tr>
<tr>
<td>Breach Analysis</td>
<td>✔</td>
<td>✔</td>
<td>Analysing breaches using some of the approaches applied in the 7 day ED analysis, giving live information on where improvement is needed.</td>
</tr>
<tr>
<td>Statistical Process Control</td>
<td>✔</td>
<td>✘</td>
<td>Statistical tool used by health communities to identify where variation is special cause i.e. something different has or is happening.</td>
</tr>
<tr>
<td>PDSA Cycles</td>
<td>✔</td>
<td>✔</td>
<td>A problem solving method trialling small cycle changes, measuring the results and amending if necessary prior to implementing any long term changes to practice.</td>
</tr>
<tr>
<td>Flow Analysis Tool</td>
<td>✔</td>
<td>✔</td>
<td>An evolvement of process mapping which analyses in more detail the activity in a process, looking at value and waste.</td>
</tr>
<tr>
<td>Change Agent Team Snapshot</td>
<td>✔</td>
<td>✔</td>
<td>An audit to understand the reasons for patients’ attendance in the ED.</td>
</tr>
<tr>
<td>6 week Rolling Average Predictor Model</td>
<td>✔</td>
<td>✘</td>
<td>Tool supplied to health communities by NLIAH. A mathematical approach to predict the number of emergency admissions, thus allowing for better planning.</td>
</tr>
<tr>
<td>Estimating Dates of Discharge</td>
<td>✔</td>
<td>✔</td>
<td>From patient profiles and historical data the date of discharge can be estimated, allowing greater planning and preparation to be carried out in order to achieve the discharge date. This allows staff, the patient and the patient’s family / carers to prepare for the discharge.</td>
</tr>
<tr>
<td>Team Building</td>
<td>✘</td>
<td>✔</td>
<td>Move rapidly through the stages of team building to encourage trust, respect, creative conflict and conflict resolution.</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>✘</td>
<td>✔</td>
<td>Take effective action to apply learning based on data; robust data collection (based on measurable facts instead of personal assumptions), collective analysis and action.</td>
</tr>
<tr>
<td>Managing Team Meetings</td>
<td>✘</td>
<td>✔</td>
<td>Maximise efficiency of time spent in meetings to encourage participation and deliver timely and appropriate outcomes.</td>
</tr>
<tr>
<td>SMART Groups</td>
<td>✔</td>
<td>✔</td>
<td>Electronic message board for networking and sharing good practice for Programme Managers.</td>
</tr>
</tbody>
</table>
Key stakeholders were invited to learn about the Collaborative methodology and the local interpretation, and implementation of national and local outcome measures at a national launch event held in May 2004. Health communities were supported by a national team consisting of a Clinical Lead, Programme Manager and Data Analyst who provided monthly programme manager/data analyst training days, five national learning networks and individual site visits.

**Figure 3: Programme of support**

<table>
<thead>
<tr>
<th>Events</th>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Day</td>
<td>May-04</td>
<td>Sep-04</td>
</tr>
<tr>
<td>Launch Event</td>
<td>Jun-04</td>
<td>Dec-04</td>
</tr>
<tr>
<td>Programme Managers Training Day</td>
<td></td>
<td>Feb-05</td>
</tr>
<tr>
<td>Learning Workshops</td>
<td>Apr-05</td>
<td>Apr-05</td>
</tr>
<tr>
<td>Programme Closure &amp; Evaluation</td>
<td></td>
<td>May-05</td>
</tr>
</tbody>
</table>

All key staff including programme managers and data analysts received training in data analysis and interpretation including statistical process control (SPC) methods. This enabled the common and special cause variation in current systems and processes to be identified, analysed and reduced.

A critical component of the Collaborative method was sharing information and learning from others’ experiences. All local communities were required to submit case studies prior to each national learning event. Case studies presented at the WECAC regular learning events provided an opportunity for sites to see changes other organisations were achieving and decide whether those changes could be adopted or adapted to their own working practices. All sites were encouraged to use the PDSA method of rapid cycles to test changes and ideas before implementing permanent modifications. It was recommended that sites conduct PDSA analysis on a regular basis for any process that appeared to be running sub-optimally to spur continuous improvement. The PDSA cycle provided a minimum level of design and planning structure to effectively incorporate improvement science into change activities. Numerous small-scale cycles could then accumulate into large effects through synergy.

Participating teams came together for a series of five learning workshops throughout the Collaborative. The teams shared ideas with other teams and utilised the time to present their own work, collect input and incorporate learning obtained from the event.

The greatest value of the learning workshops was for teams to network. The primary driver for organisational learning is communication, trust and understanding. There were some ‘silos’ which were completely broken down during this time. During the course of the workshops team members from different disciplines, experience, and levels in the organisation were encouraged to discuss, confront and problem solve with each other. Each learning workshop was followed by an action period of three months when those participating applied the change principles and tested ideas. It was during the action period that information and advice was shared through conference calls, site visits and the use of SMART Groups on the internet.
National Measures
The Collaborative set national outcome measures, or goals that related to local service delivery (figure 4). The measures centred on structure, process and outcome and reflected the national strategic agenda of emergency care access in Wales.

Figure 4: National and local indicators

Programme measures tied in the improvement work of front line teams to operational targets. These measures were fixed and were the same for every site involved in WECAC.

The performance of local health communities was reported monthly by Programme Managers using an “on line” tool.

Structure
One of the key performance indicators (KPIs) was the development of functional emergency care networks across organisations and health communities.

Its measurement centred on the availability of resources to deliver effective emergency care, established from a baseline assessment at the start of the Collaborative. Evaluation was through stakeholder self-assessment criteria (appendix 2), on a scale of 0 (starting line; no network arrangement, no communication between key stakeholders, no network forum in Emergency Care) to 5 (outstanding sustainable results, fully established national Emergency Care Network, new ways of working fully implemented, activity recognised as leading practice nationally, evidence of sustained improvements on run charts). Participants were informed the scale acted as a proxy measure for improvements in emergency care, such that if each team scored 4 or higher by the end of the project, the team could be confident that the programme would have achieved its aims. As can be seen in figure 5, the teams felt by the end of the programme a much higher level of efficacy and achieved an all Wales score of 4.
KPI: Development of functional emergency care networks locally, regionally and nationally
Method: Self assessment criteria

Figure 5 demonstrates the overall improvement in the All Wales score:

**Figure 5: All Wales Self Assessment Score (defined in appendix 2)**

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**Process**

The Welsh Assembly Government’s SaFF target on timely emergency access is that 95% of patients should spend no more than four hours in an ED. Information relating to this was routinely collated via the SITREP process (Situation Reporting, a data collection and reporting system, which involves the collection of key indicators to help determine the extent of emergency pressures on NHS organisations) and was one method of targeting and quantifying current performance. The particular Collaborative option chosen ensured that communities set continuous improvement targets for emergency access in both primary and secondary care.

KPI: A&E journey time of less than four hours for 95% of patients
Method: SITREPs report

A baseline analysis of the six months preceding the Collaborative in comparison to the final six months performance (September 2005 to March 2006) revealed that there had been a significant reduction in the number of patients breaching the 95% four hour target with 7,000 more patients each month managed within the four hours.
### Table 2: Progress against SaFF targets

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Baseline</th>
<th>Phase 2</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>September to March 2004*</td>
<td>September to March 2006</td>
<td></td>
</tr>
<tr>
<td>Percent of patients who spend less than 4 hours in the Emergency Department from arrival to discharge or admission</td>
<td>88%</td>
<td>92%</td>
<td>4%</td>
</tr>
<tr>
<td>Percent of patients who spend less than 8 hours in the Emergency Department from arrival to discharge or admission</td>
<td>97.5%</td>
<td>99.1%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Weekly average number of patients who spend less than 4 hours in the Emergency Department from arrival to discharge or admission</td>
<td>13,300</td>
<td>15,000</td>
<td>1,700 (13%)</td>
</tr>
<tr>
<td>Weekly average number of patients who spend less than 8 hours in the Emergency Department from arrival to discharge or admission</td>
<td>14,700</td>
<td>16,100</td>
<td>1,400 (9%)</td>
</tr>
<tr>
<td>Weekly average number of patients who spend more than 4 hours in the Emergency Department from arrival to discharge or admission</td>
<td>1,800</td>
<td>1,300</td>
<td>-500 (31%)</td>
</tr>
<tr>
<td>Weekly average number of patients who spend more than 8 hours in the Emergency Department from arrival to discharge or admission</td>
<td>400</td>
<td>150</td>
<td>-250 (66%)</td>
</tr>
</tbody>
</table>

* Six months preceding Collaborative (average)
If the substantial increase in patient attendance at EDs during the programme is taken into account, the improvements are much more dramatic (table 3);

**Table 3: Attendance/Performance changes throughout the Collaborative**

<table>
<thead>
<tr>
<th>Health Community:</th>
<th>% Increase in Attendances</th>
<th>Increase numbers (%) patients seen within 4 hours per week</th>
<th>% Increase in Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bro Morgannwg</td>
<td>13</td>
<td>250 (16%)</td>
<td>3.2</td>
</tr>
<tr>
<td>Cardiff &amp; Vale</td>
<td>0</td>
<td>100 (5%)</td>
<td>6.5</td>
</tr>
<tr>
<td>Ceredigion</td>
<td>15</td>
<td>40 (11%)</td>
<td>3</td>
</tr>
<tr>
<td>Carmarthen</td>
<td>17</td>
<td>180 (16%)</td>
<td>0</td>
</tr>
<tr>
<td>Conwy &amp; Denbighshire</td>
<td>9</td>
<td>160 (18%)</td>
<td>9</td>
</tr>
<tr>
<td>Gwent</td>
<td>8</td>
<td>350 (14%)</td>
<td>5.9</td>
</tr>
<tr>
<td>North East Wales</td>
<td>-1</td>
<td>35 (3%)</td>
<td>5</td>
</tr>
<tr>
<td>North Glamorgan</td>
<td>0</td>
<td>40 (4%)</td>
<td>5.4</td>
</tr>
<tr>
<td>North West Wales</td>
<td>5</td>
<td>50 (5%)</td>
<td>0</td>
</tr>
<tr>
<td>Pembrokeshire &amp; Derwen</td>
<td>15</td>
<td>60 (11%)</td>
<td>3</td>
</tr>
<tr>
<td>Pontypridd &amp; Rhondda</td>
<td>13</td>
<td>100 (11%)</td>
<td>-1.5</td>
</tr>
<tr>
<td>Swansea</td>
<td>4.5</td>
<td>260 (14%)</td>
<td>9.5</td>
</tr>
<tr>
<td>All Wales</td>
<td>8</td>
<td>1,625 (12%)</td>
<td>4</td>
</tr>
</tbody>
</table>

Throughout Wales an additional 84,500 patients per annum are being seen within the 95% 4 hour emergency care access target.

Figure 6 demonstrates the significant improvement in performance from the implementation stage (September 2004).

**Figure 6: All Wales monthly performance against the four hour target (SITREPs)**
The baseline average for the six months preceding the Collaborative was 88%; analysis of the final six months of the Collaborative showed there had been a statistically significant improvement (P value = 0) in the All Wales average performance of 4% to an average of 92% (figure 6). In real terms this represents a reduction of 28,000 patients per annum waiting in excess of 4 hours.

Performance has been sustained above 90% since 28th June 2005 and reached 93.3% on the 12th September 2005. Since the end of phase one, despite an increase in new attendances (8%) improved performance has continued and peaked during December 2005 at 94.2%. Prior to this period 90% had been achieved only on three occasions since SITREPs were introduced in September 2003 and never sustained - evidence that the local health communities, with the help of the programme, have achieved more sustainable progress. Analysis suggests that if improvement continues at the rate shown throughout the programme, this target could successfully be achieved and sustained across Wales by 2008.

Sustainability was one of the major goals of the Collaborative to ensure that all improvements made were embedded and there was spread of good practice. Bateman (2001) of the Lean Enterprise Research Centre, Cardiff University (figure 7) has shown that when undertaking improvement type activities (such as a PDSA) within an organisation five types of outcome can occur. These vary from Class A, where the organisation maintains the improvement they have made, complete any activities which are needed to sustain the activity and spreads the learning to other parts of the organisation, to Class E where organisations participate in PDSA methodology but do not maintain the improvements made and hence do not complete the loose ends. No spreading of learning occurs. These different classes of improvement have been analysed to establish what enablers need to be present to achieve a Class A outcome.

**Figure 7: Sustainability Model (Bateman; 2001)**

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The enablers are described below. Quantitative data in table 1 clearly support the programme fitting the sustainability model; qualitative data have been included to demonstrate that contributors felt the enablers were achieved:-

1. Getting the most out of your process improvement activity
   - Contribution and buy-in by the improvement team
   - Formal way of documenting ideas
   - Staff can make decision about the way they work
   
   ‘The WECAC programme has given me the motivation to try to improve the patients’ experience and patient flow through the admissions unit. It has also provided me with some of the tools to help achieve it’
   
   Jill Jones, Ward Manager, Acute Medical Unit, Pontypridd and Rhondda

2. Maintenance and focus on the improvement activity
   - Time dedicated to maintaining activity every day (reducing the sources of variation)
   - Measures to monitor improvements at the appropriate level
   - Managers stay focused on improvement activity
   
   ‘Focusing minds on the problems associated with accessing emergency care and providing opportunities for time out to think about and plan work programmes effectively’
   
   Lisa Holden, Programme Manager, Carmarthen

3. Consistency and buy in
   - Changes to working methods formally introduced to all staff who work in the process
   
   ‘Must admit I was a sceptic – but we got a lot out of it’
   
   Mr Moody Jones, Consultant Emergency Medicine, Pontypridd and Rhondda

   ‘Having an executive lead was important, but not as much as being able to give staff at ward and department level the opportunity to shape the direction of the programme’
   
   Sheelagh Lloyd Jones, Executive Lead, Bro Morgannwg

4. Strategic direction
   - Processes should have a strategy (which aligns)
   
   ‘Much of the analytical work carried out to assess our emergency flows during WECAC informed the strategic decision making processes that have resulted in the redesign of the delivery of unscheduled care in North East Wales of which NEW ERA is a significant part’
   
   David Hill, Project Facilitator, North East Wales

5. Support and Focus
   - Coordinator of activity (at least 30% of time dedicated to this)
   - Senior management should be involved in activity
   - Senior management should stay focused on activity (initiation and final feedback, follow up)
‘Setting our own targets (as well as those nationally indicated) meant that staff identified what areas were important – these were reported on just as vigorously as others’

Gaenor Shaw, General Manager, Bro Morgannwg

Performance against the 4 hour target varied by local health communities across Wales as depicted in figure 8, comparing March 2005 to March 2006, the green shaded area showing the level of improvement.

Figure 8: Performance by health community towards 95% target

It is important to note that some local health communities failed to reach the 95% target in part due to increases in the number of patients seen (table 3). Change in performance against the four hour target has varied across the communities. The level of change was related to where the health community started, that is the degree of change in performance was inversely proportional to the baseline performance (figure 9).

Figure 9: Change compared to performance

Correlation between Baseline Compliance and Communities Change in Performance

\[
\text{Increase in Performance} = 65.25 - 0.6967 \times \text{Baseline mean}
\]

<p>| | | |</p>
<table>
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<th></th>
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<tbody>
<tr>
<td>S</td>
<td>1.20550</td>
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</tr>
<tr>
<td>R-Sq</td>
<td>93.5%</td>
<td></td>
</tr>
<tr>
<td>R-Sq(adj)</td>
<td>92.8%</td>
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As depicted in figure 10, those health communities who were performing at a lower level at the start of the Collaborative made the largest improvements during the two year programme. Most of the health communities performing at the higher level did deteriorate but changes to the practice within these health communities needed to be made for future sustainability.

**Figure 10: Performance change by Health Community**

Phase 2 was to embed change and ensure sustainability within health communities. Using a Box plot (Figure 11) to depict the variation in reporting between September 2005 and March 2006, indicates the level of stability and consistency within health communities where changes have been sustained. Narrower Box plots indicate that change has been embedded and sustained within a health community. Those with wider boxes are generally due to continued improvement within that community. The upper and lower limits of the Box plot indicate the highest and lowest values reported, with the box depicting 50% of the values and the dash in the box indicating the median value.

**Figure 11: 4-hour Box plots by Trust**

It is important to show the variation and not the average alone, as the variation, as stated above, depicts the consistency and sustainability of the changes made. Variation may be a proxy of how difficult health communities have found sustainability.
Outcome
The National Framework for Coronary Heart Disease set targets for incremental improvement in coronary revascularisation or thrombolysis in Wales. WECAC supported this objective (standard 3 / action point 16) as a national outcome measure to accelerate progress towards National Service Framework (NSF) standards.

Timely thrombolysis following an acute myocardial infarction requires extensive local collaboration in all areas of emergency care and necessitates accurate measurement of all stages of the patient journey both quantitative and qualitative. The availability of existing arrangements including the Welsh Cardiac Network and MINAP naturally supported these objectives. However, there were a number of issues around collection and reporting data with apparent inconsistencies across Wales. The measurement of thrombolysis targets has been problematic to date, particularly around the collection criteria and local mechanisms for collection.

| KPI: 75% of patients who require thrombolysis to receive this within 20 minutes of arrival in hospital |
| 100% of patients who require thrombolysis to receive this within 30 minutes of arrival at hospital ED journey time of less than four hours for 95% of patients |

Method: MINAP

Performance was variable with improvements which did not achieve statistical significance. The sample size was very small, less than 1 patient in some cases and therefore could not be robustly statistically analysed. Evaluation was through local performance indicators (and MINAP).

The standards set by the British Association for Accident and Emergency Medicine (BAEM) for management of patients with a fractured hip together with the then proposed NSF for fractured hips were also included as national measures for the Collaborative.

| KPI: Fractured neck of femur: |
| a. 90% to be admitted to an orthopaedic bed within 2 hours of arrival at ED |
| b. 100% to be admitted to an orthopaedic bed within 4 hours |
| c. 100% to receive appropriate analgesia within 30 minutes of arrival at ED |
| d. 100% to have x-ray examination within 1 hour of arrival at ED |
| e. % who require surgery to undergo procedure within 24 hours (where this is not prevented by a co-existing co-ordination) |
| f. % who die in hospital within 1 month following surgical intervention |
| g. % who return to their pre-fracture residence |
| h. % who undergo a consultation in respect to falls with a specialist physician following presentation |

Method: Self assessment
There were inconsistencies in reporting these indicators with 50% of local health communities unable to collate and report the information. Again, no meaningful conclusions can be drawn from the data submitted.

**Local Measures**

Each community was required to record a minimum of three measures for each project team on a monthly basis. Each project team chose their measures which included at least one measure of the patient journey time. The group of three measures for each project team defined the scope of the work so it was essential that these reflected the improvements that were sought locally. The results of initial local diagnostic work informed the development of project team measures.

Project team measures were required to be:

- locally determined and supported by the project team and the organisation
- designed around locally agreed project team aims
- practical to collect
- easy to interpret and clear to all members of the project team

The link between the individual project team measures and the overall programme measures was made clear by documentation, learning workshops and on-site visits. Improvement in the project team measures in each of the three project groups resulted in improvement in the overall programme measures.

As each site had its own set of obstacles to overcome, the Collaborative encouraged sites to focus on individual problem solving, rather than promoting a prescriptive system wide approach. The following principles were key to making successful and sustainable improvements in emergency care access:

- A diagnostic piece of work was required at the beginning of the Collaborative to identify the true source of the problems, prior to any local action plans being developed
- Measurement was an essential step to understand what the issues were locally
- Decisions should be evidence based and required accurate and robust data collection and recording systems

The overarching strategic principles for change that teams followed were:

- Co-ordination of the patient journey
- Improving the patient and carer experience
- Optimising care delivery
- Enabling people to see themselves as part of the same system
- Matching capacity and demand

Project teams were encouraged to measure total patient journey time, from the point at which the patient presented to the end of their journey. By monitoring total patient
journey time, programmes were able to measure the overall impact of any changes made to individual stages in the journey.

Whilst health communities were also expected to set their own local performance indicators, and monitor them, they were required to report progress against the targets to the national team on a monthly basis.

Table 4 identifies the number of local indicators set for each work stream by health community.

Table 4: Reported local indicators for each health community

<table>
<thead>
<tr>
<th>Health Community</th>
<th>Primary Care</th>
<th></th>
<th>Emergency Departments</th>
<th></th>
<th>Acute Assessment</th>
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<td>Pembrokeshire and Derwen</td>
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<tr>
<td>Cardiff and Vale</td>
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<td>7</td>
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<td>Pontypridd and Rhondda</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>NHS Direct Wales</td>
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<td>20</td>
<td>47</td>
<td>44</td>
<td>51</td>
<td>50</td>
</tr>
</tbody>
</table>

Plan, Do, Study, Act Cycles

All sites used the PDSA method of rapid cycles to test changes and ideas before implementing permanent modifications. It was recommended that sites conducted PDSA analysis on a regular basis for any process undertaken to close the gap between current and required performance, whilst achieving patient satisfaction and spurring continuous improvement. The use of the PDSA as the framework for an efficient trial and learning method provides the primary vehicle to deliver the improvement science to the project teams (Langley et al; 1996). The four steps in the cycle consist of:
1. Planning the details of the test and making prediction about the outcomes (Plan)

2. Conducting the test and collecting data (Do)

3. Comparing the predictions to the results of the test (Study)

4. Taking action based on the new knowledge (Act)

Numerous small scale cycles accumulate into larger efforts through synergy (figure 12):

**Figure 12: Synergy of PDSAs (Institute of Health Improvement)**

PDSA registers were kept by the programme managers as a measure of their learning and a record of tests they had undertaken. Sites were requested to submit registers as part of their monthly reports. From the 14 areas that returned their PDSA registers, a total of 436 PDSA cycles were undertaken (table 5):

**Table 5: Reported PDSA registers**

<table>
<thead>
<tr>
<th>Health Community</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bro Morgannwg</td>
<td>55</td>
</tr>
<tr>
<td>Cardiff and Vale</td>
<td>60</td>
</tr>
<tr>
<td>Carmarthen</td>
<td>17</td>
</tr>
<tr>
<td>Ceredigion</td>
<td>13</td>
</tr>
<tr>
<td>Conwy and Denbighshire</td>
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<tr>
<td>Gwent</td>
<td>78</td>
</tr>
<tr>
<td>NHS Direct</td>
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<tr>
<td>North East Wales</td>
<td>24</td>
</tr>
<tr>
<td>North Glamorgan</td>
<td>40</td>
</tr>
<tr>
<td>North West Wales</td>
<td>27</td>
</tr>
<tr>
<td>Pontypridd and Rhondda</td>
<td>19</td>
</tr>
<tr>
<td>Powys</td>
<td>9</td>
</tr>
<tr>
<td>Swansea</td>
<td>25</td>
</tr>
<tr>
<td>Welsh Ambulance Service Trust</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>436</td>
</tr>
</tbody>
</table>
It might have been predicted that the larger health communities would have to undertake a larger number of PDSAs due to the size of the organisations. However, it is often more difficult to promote improvement initiatives in a short space of time in large organisations.

Over 55% of the PDSA cycles covered eight topics (figure 13)

**Figure 13: Breakdown of PDSA cycles by topic**

Health communities worked hard to address their priorities and the success of the programme is directly attributable to the exceptional engagement of contributors, as demonstrated by examples of good practice.
**Good Practice**

During the Collaborative, health communities across Wales carried out many changes to the processes and systems in place in order to improve the experience for the patients and carers accessing emergency care. The following topic areas show some examples across Wales of the good practice undertaken. It is not intended to be exhaustive and some topics will have been undertaken by more than one health community.

**Patient Pathway / Flow**

Flow within healthcare refers to the movement of patients, information or equipment between departments, people or organisations as part of the care pathway. Ideally there should be no delays to ensure continuous flow through the pathway. Improvements to patient flow were carried out during the Collaborative and some examples are detailed below:

**Conwy and Denbighshire**

**Bed Management Improvements**

Conwy and Denbighshire implemented a Total Bed Management Strategy to reduce the number of outliers on wards and to improve the use of the discharge lounge in order to improve flow across the Trust. 7 Day Analysis as well as capacity and demand modelling were used to collect evidence of the current situation. The changes resulted in:

- 66% reduction in outliers:

![Graph showing reduction in outliers from Jan-Jun 2005 to Jul-Dec 2005](image)

- 28.8% improvement in the number of patients being transferred to the discharge lounge before 12pm:

![Graph showing improvement in number of patients transferred before 12pm from Oct 2005 to Feb 2006](image)

*For further information contact: debbie.murphy@cd-tr.wales.nhs.uk*
Pontypridd and Rhondda

Discharge
Pontypridd and Rhondda identified discharge as an area that needed to be looked at to improve flow. Improvements included a 30% increase in patients having discharge plans, 12% increase in the number of patients transferred to the discharge lounge before midday, which resulted in a reduction in LOS and reduction in bed days used.

For further information contact: elizabeth.gallagher@pr-tr.wales.nhs.uk

North East Wales

Regular Attendees
North East Wales reviewed the number of patients who were regularly attending ED within a 12 month period. Data collection showed that there were 266 patients with four or more attendances resulting in 11,105 bed days. The information was taken back to GP Practices via the LHB in order to highlight the patients that needed Chronic Disease Management in Primary Care. There were 62 patients who attended more than 6 times a year who accounted for 3029 bed days. This data was sent to the lead consultants to address their care and frequency of attendance.

For further information contact: david.hill@new-tr.wales.nhs.uk

Welsh Ambulance Service Trust

(WAST) Discharge
The WAST linked with Conwy and Denbighshire Therapy Services who were having difficulty carrying out all the home assessments required to ensure the timely discharge of patients. A data collection showed a lot of time was lost by cancelled visits due to the lack of transport. WAST provided a dedicated vehicle to the pilot which allowed patients to be transported home in the dedicated vehicle. This allowed the therapy services to carry out assessments instead of spending time transporting patients. This resulted in the following improvement in performance:

For further information contact: jenny.lewis@ambulance.wales.nhs.uk
Gwent

Bed Turnaround
Recognising the importance of bed turnaround times in order to ensure the patient flow, Gwent focused on setting a 30 minute bed turnaround target. This involved targeting each directorate to ensure they were working to meet the target. The following results were seen:

For further information contact: fiona.ocallaghan@gwent.wales.nhs.uk

North West Wales

Working Hours
North West Wales recognised that the hours worked by the ENP did not match the peak in demand from the minor injury flow of patients and therefore changed the working hours of the ENPs to meet the demand. The change to the working hours resulted in a reduction in the number of patients breaching the 95% target by minor patients and an improvement in the flow of minor patients through the department.

For further information contact: anwen.crawford@nww-tr.wales.nhs.uk

Ceredigion

Discharge Lounge
Recognising the importance of the timely discharge of patients to maintain patient flow, Ceredigion had volunteers within their discharge lounge to act as companions to patients and provide light refreshments. This allowed beds to be turned around for new admissions and alleviated the pressure in the ED.

For further information contact: rita.stuart@ceredigion-tr.wales.nhs.uk

See and Treat
See and Treat is a model of care which is designed to minimise delays and improve the patient and carer experience in the ED. The principle of See and Treat is to assess and treat patients with minor injuries soon after they arrive in the department, thus, reducing delays and waiting times. The aim is that the first clinician to see the patient should be capable of assessment, treating and managing the patient safely. This method of working was implemented during the WECAC programme as the following case studies show:
Carmarthen introduced See and Treat and implemented a pro forma to standardise the patients’ assessment. This resulted in the following improvements in patient care:

1. Chest pain
2. Shortness of breath
3. Headache
4. Bleeding
5. Abdominal pain
6. Any child
7. Need for analgesia
8. Self harm
9. Any reason to give you cause for concern

For further information contact: lisa.holden@carmarthen.wales.nhs.uk
Swansea

See and Treat
Swansea implemented See and Treat by creating a dedicated clinical area for the patient group and having a multidisciplinary team with the skills to assess, refer or treat the patient safely. This protected the flow of the patient group through the ED and improved the patient experience by removing on average 25 minutes from the patient’s journey.

For further information contact: rebecca.davies@swansea-tr.wales.nhs.uk

Role Redesign / Change
Role redesign is often carried out to improve patient care, address staff shortages and to increase staff satisfaction through the development of new and redesigned roles. This often involves changing the breadth and depth of roles, creating new roles or moving responsibilities within the disciplinary team. Role redesign became part of the WECAC programme to improve the patient experience and access to emergency care.

Powys

Nurse Referral to X-Ray
Powys identified delays caused to patients who required an X-Ray. Patients were assessed by a Nurse and the need for an X-Ray identified but the GP had to formally request the X-Ray. Nurses underwent training and from March 2005 were able to refer specific groups of patients following agreed protocols to Radiology. This reduced the delay to patients and improved the patient and carer experience.

From March 2005 to April 2006 a total of 472 referrals have been made by nurses to the Radiology department, previously no referrals were made.

For further information contact: sue.jones2@powyslhb.wales.nhs.uk
Gwent

Navigator Role
Gwent Healthcare NHS Trust introduced the role of a navigator, a senior nurse with triage skills and the authority to make decisions on patient placement. The role involved monitoring patient progress through ED and MAU, balancing capacity and demand, utilising the short stay ward appropriately and liaison with bed management. This resulted in the following improvement in performance:

For further information contact: fiona.ocallaghan@gwent.wales.nhs.uk

Conwy and Denbighshire

Practitioner Assistants Team
The introduction of a Practitioner Team was considered due to the poor performance in minor injury patients against the target to undertake some of the tasks that would normally be undertaken by nurses or junior doctors. The practitioner assistants would assess a patient's needs on arrival at ED, instigate the ordering of bloods and tests, follow up the results and liaise with other departments. The trial resulted in a dramatic increase in performance against the target.

For further information contact: debbie.murphy@cd-tr.wales.nhs.uk
Welsh Ambulance Service Trust

New Roles
The WAST have worked to change roles and responsibilities of staff in order to meet the changing demands on the service with the introduction of Assess and Refer which includes paramedics being trained to be able to assess patients at the scene and refer to the most appropriate care setting, this also involves collaboration with LHBs and NHS Trusts. Paramedic Practitioners are trained to work autonomously and to work to minimise the number of inappropriate admissions to acute care. The WAST have funded the training for 2 Emergency Care Practitioners which allowed them to attend calls and ensure the patient receives the right care at the right time.

The role redesign undertaken by the WAST reflects the recognition of the need to change methods of working to meet the changing demands on the system and the need to improve in order to ensure patients are being seen at the right place, at the right time.

For further information contact: david.morris@ambulance.wales.nhs.uk

North Glamorgan

Acute Physician
North Glamorgan recognised a lack of senior staff on duty in ED between the hours of 9am and 5pm, with the peak number of admissions between 11am and 2pm. This bottleneck was causing patients to breach the four hour target. To address the issue an Acute Physician was employed to be the first point of contact for appropriate patients during 9am and 5pm. This resulted in 20% of attendances being seen and treated by the Acute Physician, a reduction of 75% in delays in waiting for a bed after the decision to admit and no patients breaching the four hour target waiting for the medical on call team.

For further information contact: neil.cooper@nglam-tr.wales.nhs.uk

Cardiff and Vale

Dedicated Porter
Cardiff and Vale recognised from their data that patients were experiencing delays in being transferred to the ward after allocation for a bed therefore a dedicated porter was employed in ED in order to transfer patients as well as carry out additional duties such as moving oxygen bottles and taking patients to X-ray. Having a dedicated porter resulted in a 25% reduction in delays for a porter and the 30 minute bed turnaround target being met 96% of the time.

For further information contact: andrea.kempster@cardiffandvale.wales.nhs.uk
Pontypridd and Rhondda

Physicians Assistant
Pontypridd and Rhondda had issues with late discharges impacting on the ED and found that a large number of patients who were in hospital for Troponin 1 tests were not being discharged until late afternoon. This was because testing did not start until 11am in the morning and ECGs were often not available for the Consultant. Pontypridd and Rhondda therefore redesigned the role of the Physicians Assistant ensuring ECGs were available for the consultant and enabled testing to start at 9am. This had a dramatic effect on the discharge profile of the patients and alleviated pressure in the ED.

Information and Data
This is a topic that almost all health communities have identified as critical the importance of having accurate, timely data and information. It is essential to measure improvement and quantify the effects of change. This is demonstrated by the following examples:

Bro Morgannwg

Live Information
Bro Morgannwg identified the importance of having live information to be able to manage the processes in ED. The IM&T department developed a system producing live and accurate information on the current state within ED. The package was developed highlighting patients in ED and their waiting time, indicating those patients who had delays in their care and would potentially breach allowing the department to pull them through the system.

For further information contact: lynn.davison@bromor-tr.wales.nhs.uk
Carmarthen

Recognition of the Importance of Data
Carmarthen focused on accurate and timely data to aid problem solving. They recognised this was crucial in determining a course of action and the results. Carmarthen employed a dedicated Information Analyst to produce daily and weekly data on performance and to create breach analysis to identify the reasons patients had breached the 4 hour ED target. This information was then used to change the processes in order to minimise the possibility of the delays happening again.

For further information contact: lisa.holden@carmarthen.wales.nhs.uk

Powys

Computerised Records
Powys LHB recognised that the geographical area covered by LHB and the number of sites involved created a fragmented paper based system. The system was not helped by poor communication across sites and poor sharing of information which did not support staff when they needed information on patients attending MIU’s or community hospitals. The system meant that no accurate activity data was available and there was a lack of understanding of what was happening within Powys LHB. A computerised system was therefore implemented across the LHB and data collection resulted in activity and attendance trends being presented to the board who then supported a case for service redesign within the LHB.

For further information contact: sue.jones2@powyslhb.wales.nhs.uk

Co-location / Allied Health Professionals
The co-location of Allied Health Professionals in ED has been recognised as a method of addressing the needs of patients with social and primary care issues and minimising their waiting time in the ED. Many of the minor patients who access ED could be supported by Allied Health Professionals and co-location results in patients being seen by the right people in a timely manner and also minimises disruption to the flow of patients.

Swansea

Community Nursing and Therapy Services
The co-location of community nursing staff and therapy services within ED was implemented to ensure rapid assessment and discharge planning, to advise on alternative care methods and to enable the support of patients in the community rather than admitting them into acute care. During the Cycle 834 attendees were seen, 683 being discharged directly from the ED, with re-attendances falling to 2.9%. 555 attendees were also referred to other agencies for further support.

For further information contact: rebecca.davies@swansea-tr.wales.nhs.uk
District Nurses in A and E
A pilot having district nurses based in ED overnight was carried out to support patients who had social and primary care issues. The District Nurses had equipment and transport to take patients home where appropriate were able to support patients who rang ED. District nurses attended patients homes to avoid their attendance in ED. This resulted in district nurses being able to respond 21 minutes quicker than prior to the trial (41% improvement).

For further information contact: karen.blackmore@pd-tr.wales.nhs.uk

NHS Direct Wales
A and E Integration
NHSDW found that a large number of telephone queries were received by EDs across Wales asking for advice. NHSDW addressed this issue by working with EDs to transfer callers to NHSDW who were then able to deal with the queries, triaging callers in the same way as all NHSDW callers and advising callers on the most appropriate access to care. NHSDW handled 2,397 calls from three health communities where integration with ED had been undertaken, with only 37% of callers needing to access an ED department or a 999 ambulance. This improvement has resulted in ED departments not having to deal with the calls and callers getting advice on the most appropriate care setting, as shown below:

For further information contact: sue.mcguirk@nhsdirect.wales.nhs.uk

National Leadership and Innovation Agency for Healthcare
North Glamorgan

Primecare
North Glamorgan carried out a detailed data collection to analyse the number of primary care patients that were attending the ED and the reasons for their attendance. This analysis was reviewed by the LHB and GPs to highlight the number of patients that were attending with primary care needs. This work led to agreement that the ED could refer a minimum of one patient per hour to the Primecare team (Out of Hours service) who were co-located on site. This resulted in a reduction in the pressure on ED and raising awareness of patients about the Out Of Hours service that was available on site where their primary care needs could be met more appropriately.

For more information contact: neil.cooper@nglam.wales.nhs.uk

Cardiff and Vale

Out Of Hours (OOH) Co-location
Cardiff and Vale had access to CRI for OOH Primary Care patients but the system was not working well as the ED had to ring for an appointment and then wait for a call back before sending patients on a 3 mile trip to the centre, a delay which resulted in a reluctance of staff to refer to the centre. After discussion with the LHB it was agreed to locate a GP on site in the University Hospital of Wales ED using agreed triage and protocol systems for patients to be referred to the GP. This resulted in 251 patients referred during the pilot which would be the equivalent to 12 SHO hours per pilot day saving a total of 179 SHO hours during the pilot.

For further information contact: andrea.kempster@cardiffandvale.wales.nhs.uk

Pharmacy and Medicine Improvements
The Medicines Management Collaborative (MMC) programme ran over the same period as the WECAC programme. The MMC raised the profile of and the need to improve medicines management. Given the synergy between the Collaboratives it was also identified as an area that could be improved to support patient flow in the discharge process.

Pembrokeshire and Derwen

Transcribing Medicines
Having identified that there are some delays between a patient being able to be discharged and take home medicines being ready, Pembrokeshire and Derwen implemented a new system using the All Wales Medication Record which allowed the consultant to tick the appropriate medicines required by the patient and sign the sheet to authorise medicines to be transcribed. The pharmacist was then bleeped to transcribe and dispense the medication and advise the patients on taking the medicines. This system resulted in 80% of patients receiving their take home medicines in less than 30 minutes where previously patients could wait over three hours.

Continued on next page
Culture Change
The culture of an organisation can ultimately have a positive or very negative effect on the work trying to be undertaken and achieved within an area. If there is not a culture for sharing or listening to ideas then it is difficult for staff to come forward with suggestions on how improvements could be made to the system. The culture and behaviour of patients also needed to change in order to try and encourage patients to seek the most appropriate care rather than access the ED. Recognised as an important element to success or failure, health communities addressed this issue as shown below:

Pembrokeshire and Derwen

Culture Change
With high staff turnover, low staff morale and poor communication it was recognised that changes needed to be made. Pembrokeshire and Derwen created a Clinical Services Plan and invited staff to become involved in the process. Staff were encouraged to voice their opinions and ideas. An evaluation of the management capabilities to deliver the plan was also carried out to provide evidence of their commitment to improvement. These changes resulted in Clinicians volunteering to become Clinical Leads with a new culture beginning to emerge with listening and sharing becoming commonplace. There is recognition of the need to build relationships in order to get work done.

For further information contact: karen.blackmore@pd-tr.wales.nhs.uk

Conwy and Denbighshire

Rhoslan GP Surgery
The surgery recognised that their patients were attending ED without trying to access Primary Care OOH services or seeking any alternative advice. A poster campaign was launched to raise awareness of the Primary Care OOH service available to the patients and where they could seek alternative advice. This campaign resulted in 7% increase in the awareness of patients and 7% increase in the number of patients accessing alternative advice first. The campaign successfully resulted in a 15% reduction in the number of patients attending ED OOH and a 17% reduction in patients attending ED in hours.

For further information contact: debbie.murphy@cd-tr.wales.nhs.uk

For further information contact: karen.blackmore@pd-tr.wales.nhs.uk

<table>
<thead>
<tr>
<th>Pembrokeshire and Derwen</th>
<th>% pre Audit</th>
<th>% Post Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mins or less</td>
<td>30 mins - 1hr</td>
<td>1hr-2hrs</td>
</tr>
<tr>
<td>90%</td>
<td>80%</td>
<td>70%</td>
</tr>
</tbody>
</table>
North West Wales

**Perfect Monday**
North West Wales Trust invited all members of the health community to be involved in a ‘Perfect Monday’. It was agreed that no patient would breach the four hour target on Perfect Monday. Senior managers and Executives were invited to the Emergency department to see how the department worked and where delays occurred. Only one patient breached the four hour target as Senior Managers were able to remove the delays from the system in many areas. This Cycle resulted in a change in the culture in the health community with greater engagement and increased communication and understanding of the pressures in the ED by the Executive Team. Problems with the current processes were highlighted and changed.

*For further information contact: anwen.crawford@nww-tr.wales.nhs.uk*

Bro Morgannwg

**Whole System Approach**
Bro Morgannwg carried out a number of different methods in order to improve the flow of patients through the system and to improve performance. It was realised early on that no single change would make a difference and therefore a whole system approach was needed. Bro Morgannwg involved staff in making changes across the whole system. This allowed the staff to recognise the pressures in different areas and to have ownership of changes made.

*For further information contact: lynn.davison@bromor-tr.wales.nhs.uk*

North East Wales

**Cardiac Admissions**
From an audit of inappropriate admissions North East Wales recognised that 25% of admissions of cardiac/chest pain were inappropriate as they resulted in a length of stay of 0-1 day. On average 78 patients per month were admitted to Luke ward with 84.6% of these patients being discharged with a negative Troponin 1 result. A protocol was agreed to assess cardiac/chest pain patients in the ED at risk of MI. Patients with risk factors were admitted - those with low risk factors would be assessed for triple cardiac markers under the agreed protocol, any patients with no changes within 2 hours would be discharged from the ED with a same day/next day GP follow up appointment. This change resulted in 67.35% of cardiac/chest pain attendances being discharged safely from the ED without admission.

*For further information contact: david.hill@new-tr.wales.nhs.uk*
Sharing and Networking:
Communication and implementation of new ideas were key to the success of the programme. The Collaborative was designed around maximising learning transference to the job to ensure sustainable problem solving throughout the organisation. This was reinforced in three ways.

1. There were five national learning workshops, each with a different learning theme, held throughout the Collaborative. These attracted international and WAG speakers who presented new learning or emerging policy to the audience. There were 10 international speakers, 12 national speakers, 4 academic speakers and 3 WAG speakers. Dr Brian Gibbons, Minister for Health and Social Care, attended a learning event and met individual health communities to understand the work that had been undertaken at a local level. His attendance clearly demonstrated the importance attached to WECAC at Ministerial level.

Learning events were limited to 125 places due to restrictions in accommodation with staff voluntarily attending each of the learning events sharing in the good practice and learning presented. Requests to participate increased significantly with each event. These events recognised achievements to date and were planned to maximise participation between teams, introduce new ideas and encourage participants to share information with their local health communities and bring best practices back to their own workplaces. There has been extensive sharing of information and learning via PDSAs, poster displays and presentations at the various learning network events and development days. These were rated highly by participants. Whilst these were by no means a comprehensive list of every improvement that has been made, it provided a sample of the high quality examples from around the country. Each local health community was expected to fully contribute by providing reports of progress to date prior to each learning event. The top 10 PDSAs (as judged by the National Team) were presented by the teams concerned at the learning workshops.

The design and delivery of these learning events has been very important in programme delivery. There was a need to gain maximum engagement and enable mutual learning rather than just merely carrying out teaching on a one way level. With all health communities attending events the opportunities to learn from peer group to peer group were maximised. The learning events raised and maintained teams motivation levels and helped build trust and confidence between inter disciplinary and multi-site contributors.

2. National visits to all health communities took place between learning workshops to support sites in the implementation of action plans. The facilitator would provide suggestions, talk about progress of the initiatives and share best practices as adopted by other areas. As a result of these visits, supplementary support was provided from the team or experts identified to assist as required.

Local teams were required to submit reports on a regular monthly basis to the national team on progress made. The reports were reviewed to identify areas where support and education could be provided and prepared the national team so they could target their feedback and support during their visits.
3. Data analysts were trained and the online reporting tool refined throughout the Collaborative. Programme managers especially appreciated the support that the national data analyst provided:

‘Having the support of the NLIAH data analyst provided us with a voice. Consequently we were empowered, through having hard evidence, to successfully meet our modernisation targets’

Sue Jones, Programme Manager, Powys LHB
Evaluation

This was the first time a health and social care Collaborative approach has been formally evaluated within Wales. It was therefore essential to assess the impact and sustainability.

Stakeholder views were captured through four key methods and compared with the Collaborative model and sustainability model detailed earlier:

- Regional focus groups for Programme Managers
- Online questionnaires for Programme Managers
- National Team Visits for Senior Management and Clinical Leads
- Site visits to front line staff

All health communities agreed that the Collaborative had raised the profile of emergency care and had allowed the creation of links and networks across health communities and Wales.

Collaborative Model

Qualitative data indicated the Collaborative Model criteria (Ovretveit; 2002) have been met. Some examples are shown below:

1. Achieve a rapid measurable improvement to patient care or support services in a short time (8-18 months) to maintain this improvement

‘The WECAC programme helped to move everything off the back burner’

Sian Vaughan, Team Leader, Brecon Hospital, Powys

2. Close the gap between everyday and best practice or performance

‘The opportunity of networking and sharing best practice has been facilitated through the WECAC programme’

Claire Bevan, Directorate Manager, Medical Directorate, Pontypridd and Rhondda

3. Spread ideas for improvement across participating teams

‘The support from clinical and management colleagues in this endeavour was remarkable, and has helped to shape the way the Trust has handled other projects’

Gaenor Shaw, General Manager, Bro Morgannwg

4. Permanently change the culture and attitudes in the participating teams and their units towards making change and using quality methods

‘PDSA is now part of the language and culture of the Trust’

Lesley Angel, Inpatient Placement Manager, Gwent
5. Participating teams to spread their ideas for improvement and use of quality methods to other units within their organisation, and/or to other organisations

'I feel strongly that one of the strengths and successes of WECAC has been the opening of effective communication lines, mainly between Primary and Secondary Care, and there is a vital need for these to be sustained for the long term benefits of WECAC-initiated projects to develop further and to succeed.'

Dr G Wynne Jones, Primary Care Team, Conwy and Denbighshire
**Sustainability of Process Improvement Model**
The sustainability of process improvement is detailed below.

**Table 6: Sustainability of Process Improvement Model**

<table>
<thead>
<tr>
<th>Contribution and Buy In by the Improvement Team</th>
<th>Formal way of documenting ideas</th>
<th>PDSA Cycle registers and storyboards capture the ideas tried, tested and where appropriate, implemented and record the work behind changes made. Other use of tools (table 1) has qualified and quantified actions required which have resulted in a local health community action plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff can make decisions about the way they work</td>
<td>Local structures supported by senior managers have empowered and authorised staff to test and implement changes.</td>
<td></td>
</tr>
<tr>
<td>Maintenance and Focus on the Improvement Activity</td>
<td>Time dedicated to maintaining activity every day (reducing the sources of variation)</td>
<td>Daily breach analysis, bed management meetings occur in all health communities which allow the reasons for breaches to be monitored and managed.</td>
</tr>
<tr>
<td>Measures to monitor improvements at the appropriate level</td>
<td>Data analyst funding and training that was given through WECAC has enabled health communities to establish reporting systems to monitor and measure improvements. Improvement of local management structures with formal reporting mechanisms.</td>
<td></td>
</tr>
<tr>
<td>Managers stay focused on improvement activity</td>
<td>The improvement in the reported effectiveness score of local health communities emergency care networks demonstrates real change in the processes and support for whole system improvements.</td>
<td></td>
</tr>
<tr>
<td>Consistency and Buy In</td>
<td>Changes to working methods formally introduced to all staff who work in the process</td>
<td>PDSA Cycle methodology has allowed sharing of information and involvement in testing changes. Has demonstrated an improvement by the sharing of best practice.</td>
</tr>
<tr>
<td>Strategic Direction</td>
<td>Processes should have a strategy (which aligns)</td>
<td>The local Steering Group ensured executive support and commonality of purpose, which was reinforced throughout each local health community. Real change could only be made by aligning programme priorities with those regarded as important at the senior leadership, middle management and front line staff.</td>
</tr>
<tr>
<td>Support and Focus</td>
<td>Coordinator of activity (at least 30% of time dedicated to this)</td>
<td>A lead or programme manager was essential to the success of the programme and in coordination the work being undertaken.</td>
</tr>
<tr>
<td>Senior Management should be involved in activity</td>
<td>Collaborative was sponsored by WAG with strong Ministerial support. Health communities were supported at executive level with clinical leads.</td>
<td></td>
</tr>
<tr>
<td>Senior Management should stay focused on activity (initiation and final feedback, follow up)</td>
<td>The profile, structure and targets supported sustainability. Many programme managers reported directly to the Chief Executive with regular updates, demonstrating high level commitment to programme aims. Highly effective leadership was demonstrated through clear expectation (commitment to the programme), tracking results and providing appropriate recognition and praise to key contributors.</td>
<td></td>
</tr>
</tbody>
</table>
Using the stakeholder analysis tool it was clear that the majority of the stakeholders involved in the programme had positive perceptions towards the work of the Collaborative. The single group that had the strongest positive support for the programme were front line staff. There was support from Chief Executive/Director level within the local health communities, with some exceptional examples of leadership. It was highlighted however, that whilst these key people were supportive of the Collaborative, WECAC was not always perceived to be a high priority making it difficult in some localities for the Programme Managers to have the authority to make changes within the health community, especially in communities where Programme Managers were not seen to have explicit and sustained support of the Chief Executive.

Local health communities reported variation in the engagement and influence of clinicians and middle management.

An online questionnaire was sent to each of the fifteen Programme Managers (appendix three) of the respondents 33% had undertaken formal programme management training and 50% had undertaken informal training only prior to the Collaborative either “on-the-job” or via NLIAH training. Programme Managers had varying degrees of management and clinical experience; 83% had over 9 years NHS experience and of these 80% worked in the health community in which they were Programme Managers.

All Programme Managers agreed that the learning networks were valuable and that the tools and techniques that they had learnt in the Collaborative were beneficial to their work.

87% of respondents indicated that their local steering groups would continue beyond the lifespan of the Collaborative. All Programme Managers responded positively to the improvements that had been made during the course of WECAC with recognition that these changes had been linked directly to the work undertaken in the Collaborative.

50% of the respondents stated that they spent 75-100% of their time working on the Collaborative with the remaining 50% indicating that 50-75% related to WECAC.

On completion of the Collaborative, 67% of the Programme Managers were promoted, 17% were funded to continue their role and the remaining 16% returned to their previous role. 100% of the respondents stated that they felt empowered to influence change within their organisations as a result of learning as a Programme Manager.

The 14 participating communities (NHS Direct, Welsh Ambulance Service Trust and 12 local health communities) were visited and asked to identify the strengths and weaknesses of the Collaborative. Attendees included clinicians, managers, executives, project leads and programme managers. The meetings were semi structured and the communities were questioned regarding the structures, reporting and networking as well as understanding how the tools and techniques would be integrated into the performance framework and cascaded throughout organisations. Participation within the meetings ranged from 3 to 20 individuals. Each community was allocated 1 point for each area they identified. Key themes are captured in table 7.
<table>
<thead>
<tr>
<th>Strengths</th>
<th>Total</th>
<th>Weaknesses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Events</td>
<td>11</td>
<td>Lack of Engagement/ support</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Clinicians, Leadership)</td>
<td></td>
</tr>
<tr>
<td>Contacts / Links Created</td>
<td>7</td>
<td>Data / Information</td>
<td>5</td>
</tr>
<tr>
<td>Engagement</td>
<td>7</td>
<td>Short Timescale</td>
<td>4</td>
</tr>
<tr>
<td>Data / Information Support</td>
<td>6</td>
<td>Lack of working partnerships</td>
<td>5</td>
</tr>
<tr>
<td>Programme Managers Days</td>
<td>5</td>
<td>Misplaced Focus</td>
<td>3</td>
</tr>
<tr>
<td>Demonstrating Evidence for Change</td>
<td>7</td>
<td>Lack of Consistency</td>
<td>2</td>
</tr>
<tr>
<td>Tools and Techniques</td>
<td>4</td>
<td>Lack of Ability to See Whole System</td>
<td>1</td>
</tr>
<tr>
<td>Ambulance Trust Involvement</td>
<td>3</td>
<td>Lack of Performance Management</td>
<td>1</td>
</tr>
<tr>
<td>Evaluation of Local Situation</td>
<td>3</td>
<td>Lack of Sustainability</td>
<td>1</td>
</tr>
<tr>
<td>Funding</td>
<td>3</td>
<td>Not all Opportunities Addressed</td>
<td>1</td>
</tr>
<tr>
<td>Raised Profile</td>
<td>3</td>
<td>Poor Communication</td>
<td>1</td>
</tr>
<tr>
<td>Whole System Understanding</td>
<td>4</td>
<td>Staff Turnover</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Support / Involvement</td>
<td>2</td>
<td>Timing of Programme</td>
<td>1</td>
</tr>
<tr>
<td>Executive Support / Involvement</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing Good Practice</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Experience Improvements</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training / Learning</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>Total</td>
<td>36</td>
</tr>
</tbody>
</table>

The highest rated strength was the learning workshops. The tools, methodologies and data about current thinking and best practices were highly valued by participants. They appreciated the time to meet with their teams and also the opportunity to assess their progress nationally. Attendees felt valued which in itself motivated them to fulfil the demanding programme targets.

The second highest strength was in making contacts, engagement and demonstrating change. The groups felt the programme ‘made Wales a smaller place’ and attendees proactively used networking opportunities to organise visits to areas with best practices. These have proved so successful that several have visited English local health communities to gather more ideas. Teams saw more engagement of multi-disciplinary professionals across the local health community. Positive change was seen in the way improvements were undertaken and could be tracked. The ability to provide evidence that change had occurred was again a powerful motivator to continue the change cycle.

The data and information support was also appreciated (6) however, the national data analyst was recruited midway through the programme so although the support was appreciated it was also seen as a weakness (5). The Collaborative would have wished to access such a valuable resource at the beginning of the programme.
The teams indicated that weaknesses were not necessarily problems with approach but something that could be adapted and learned from. The highest rated weakness was lack of engagement from clinicians, middle managers and some executives (10). The second highest rated weaknesses were related to the information analyst (5), as discussed above, and lack of organisational partnerships. The latter related to the perception that health communities do not talk to each other and the lack of integration in the way that some teams implemented the programme. Four teams felt the programme was too short and would have preferred the Collaborative to have continued but this may have related to delays in recruiting programme managers in certain areas.
Discussion - The Patient, Stories and Statistics

The Patient
The overarching goal of the Collaborative was to improve emergency care access for patients in Wales. A team works more efficiently, feels more competent and satisfied leading to a ‘virtuous cycle’ where it feels empowered to make more changes and thus feel more satisfied (Tichy & Cardwell; 2002). Qualitative and quantitative data indicates that this cycle is in place in many of the health communities.

‘The programme kept us focused on what was right for the patient – no delays, duplication and good care/treatment – the targets just helped us to measure how successful we were. Setting our own targets (as well as those nationally indicated) meant that staff identified what areas were important – these were reported on just as vigorously as others’

Gaenor Shaw, General Manager, Bro Morgannwg

This programme focused on the ability of everyone in patient care to be a knowledge worker i.e in other words, everyone was encouraged to question and share their thinking, to experiment to determine if assumptions were correct or delivery appropriate and continually review and refine processes. Front-line workers especially felt their patients benefited from the PDSA problem solving process. Comments such as ‘Nurses are beginning to smile again – we feel more in control’ were shared with the national team. This was an ambitious scheme; asking employees to continually question processes and assumptions is not easy to manage. This could be the reason why middle managers were not as enthusiastic as senior leaders and frontline employees.

The positive effect of this type of transformation activity on the patient is an important outcome. More can be achieved in this area and further NLIAH programmes will address the specific needs of patients requiring access to unscheduled/emergency care, ensuring that the right care is provided in the right location by the right health care professionals.

Stories
While the Collaborative was designed to provide an evidence base for improvement in patient care and performance, stories inherently play a part in the perception of organisations and organisational performance. Stories are powerful in human activity for three reasons. The human brain seems equipped to process stories more readily than other types of input, often the stories are first hand and enable a connection between story teller and listener often because of the enthusiasm for the story to be told and finally stories told in this way make the observer overestimate the probability of the risk of something happening of a similar nature again (Tversky and Kahneman; 1974). This in turn may lead to guidelines being written or actions taken which account for these distorted probabilities. This is important as the Collaborative presented an opportunity to not only challenge local ‘stories’, some of which have
been passed down the generations but also it has enabled new stories to emerge full of possibilities. In addition the Collaborative enabled them to be shared across different health communities.

The Collaborative aimed to develop a whole system approach, one which would build on partnership working between primary and secondary care providers, to problem solve. This has been perhaps one of the more difficult areas to implement as in many ways it required a change of mind set. However, the informal networking opportunities afforded by learning events clearly assisted in breaking down the barriers between groups. A common focus on priorities with clear outcomes assisted the communication and ultimately enhanced discussion and sharing of best practices.

In order to introduce the Collaborative process, it was important to include a wide range of stakeholders in the learning process. A series of learning events were undertaken with the agendas closely aligned to goals to maximise learning transference. Agendas were specifically tailored to increase opportunities for interaction between the participants. There were some ‘silos’ which were completely broken down during this time. Indeed, feedback from participants indicated that they found the events extremely helpful both in terms of learning, networking with teams who were grappling with similar problems, and benchmarking their progress against other areas. Interestingly, during the learning workshops the groups worked together for longer periods of time than scheduled, using up their personal time, to contribute. Perhaps the most critical component of the programme was the front line staff learning. Teams clearly took the information, tools and techniques from the events and applied it in the work context. The national team were able to meet with front line staff, discuss their findings and bring their insights to other teams across Wales. Feedback was received that this was helpful through reinforcing progress, supporting ideas and making suggestions based on other local health community best practices.

Perhaps one of the most significant findings is the feeling of self efficacy experienced by participants. Self assessments, distributed amongst teams to describe the effectiveness of emergency care, demonstrated improvement throughout Wales in the way the networks were themselves working. Whilst there was variation in the pace that some communities reviewed the terms of reference and membership, the all Wales position improved from a self assessment baseline of 1.75 to 4 by the end of the Collaborative. The national self assessment score improved as the networks developed over the course of the Collaborative, a pattern that would be expected only if change occurred.

The teams being considerably closer to accomplishing all aspects of the three aims statement; were able to undertake coordinated PDSA cycles to test improvements across the patient pathway with clear evidence of measurement based improvement, local networks were representative of the local health community and actively engaged and seeking improvement, with executive support and using data to review the flows of emergency and elective patients.

This element of the Collaborative is as important as the statistically recorded improvements in performance. A sustainable improvement programme requires all the strands of the Collaborative structure to be present for transformations to occur. Cogniscence of the interrelationship of the different strands of the Collaborative and the multi-factorial nature of the contribution to its success needs to be fully understood to enable replication and improvement to the mechanism for future application in Wales.
Statistics
The Collaborative has been able to demonstrate an improvement of 4% in performance against the 95% emergency care access target with an additional 12.7% of patients seen in less than four hours; patients breaching this target were reduced by 28,000. A sustained 92% achievement of patients who wait less than 4 hours can be attributed to the programme and the efforts of health communities throughout Wales. Prior to Phase 1 of the Collaborative 90% was achieved only on three separate occasions. The patient can now expect a faster response in most of the local health communities. This bodes well for the future with improvement which is significant, however whilst the total time for patients waiting has reduced, the experience for patients remains variable. Hence this is an area for further exploration in the forthcoming NLIAH programme.

The original data shows that some local health communities did not improve with respect to this target. However, there were large and sudden increases in patient numbers accessing emergency care. The original number of presenting patients was expected to remain fairly steady throughout the study but there was an overall increase of 8% patients per annum with some communities reporting 15% increases. Taking this increase into account, the results show a tremendous effort by health communities with increased overall performance by 13%. This is an important outcome and one that should not be overlooked.

A further issue may have been that small incremental changes are not enough and a larger, more complex solution might be needed which will naturally involve multi-disciplinary and possibly multi-organisational whole scale changes. In addition it is possible that front line staff, satisfied with baseline results at the commencement of the Collaborative were not convinced about the need to change practices. Figure 9, shows the linear relationship between community results and Collaborative impact. Of the health communities who started the programme with good results (either reaching target or 90% and above), most deteriorated by up to 3% or had no change – with one exception who increased from 92% to achieve 94%. In contrast, those communities with a 4 hour performance between 80-86% showed significant improvement, with some improvements up to 9.5%. The momentum of these participants catching up with the front runners means that the patient now can expect a more consistent service throughout Wales. Those who were further away from the target saw this as a priority and an opportunity and understood the need for change and therefore were more motivated to apply learning and substantially improved their performance.

From the PDSA Cycle registers received it was clear that a significant amount of valuable work has been undertaken within the local health communities (436 PDSA Cycles being carried out within 14 local health communities). Three local health communities; Gwent, Cardiff and Vale and Bro Morgannwg carried out 44% of the total number of PDSA Cycles carried out. The stakeholder views supported the use of PDSA Cycles stating that the tools and techniques that had been provided to the health communities were valuable and useful to the work being carried out. It can be seen that not only did the local health communities improve their performance against the targets but they also undertook substantial process and system improvements to make changes for the longer term.

Although several outcomes have not been reported during the course of the Collaborative, key improvements have been made in addressing the deficit against the
four hour emergency care target. Two of the health communities which chose not to participate in Phase 2 rejoined WECAC within a few months. This was indicative of the usefulness of the programme and the awareness of health communities that the methodologies supported the sustainability of improved performance.

The 4% increase in the performance against the 4 hour emergency access target is statistically significant (P value = 0) and will continue to improve with the process changes becoming embedded into the practice of the local health community. Process change is essential for the improvements in outcomes and as such WECAC has delivered a significant amount of process change with the use of tools and techniques such as the PDSA Cycle which local health communities now use across the whole system.

It was clear from the variation in the quality and completeness of data reported for the clinical performance indicators that health communities have found reporting challenging, with a lack of robust information collection systems in place. We cannot fully ascertain the impact of thrombolysis and fractured neck of femur projects due to the difficulties of data collection. Some health communities were unable to provide reliable and consistent data. Data systems were not already established and the initiatives did not appear to be given the strong leadership support or focus throughout organisations that were evident in the emergency care target.

The Coronary Heart Disease Network in the South East Region worked with programme managers to improve the quality of MINAP information. Some health communities experienced problems in accessing local information to support monthly reporting. Although the Collaborative used the standards set by the British Association of Emergency Medicine (BAEM) it was clear that organisations were unable to collate and report the information. Given the inconsistencies in reporting the fractured neck of femur information, with some organisations indicating an inability to collate and report information, this KPI has not been analysed.

The improvements in delivery against the four hour emergency access target can be attributed to different systems and processes being instigated by local health communities which have resulted in improved performance and offset the increased pressures from rising levels of attendance. Appendix 4 summarises the work plans and reported national and local indicators by health community.

Figure 14 highlights that despite the increase in new attendances the number of patients breaching the four hour emergency care access target continued to fall from 1830 breaches to 1310 breaches per week (29% reduction). Figure 15 shows the increase in attendances.
A positive outcome of the programme has been the 67% of programme managers who have been promoted. This indicates health communities value the tools, techniques and experience gained by individuals in this role. Some programme managers already had extensive management experience but for others this was their first management role. Although they were all very dedicated and extremely committed, those with the most experience, as can be expected, appeared to have the confidence to maximise the opportunities and impact presented by the Collaborative.

From May 2006 the SITREP data definitions for the reporting of the four hour emergency care target were refined. If the definition is adjusted to reflect the previous definition it can be seen that improvement has been sustained for the reporting period (31st August 2006).

Figure 16 demonstrates nationally that variation has reduced indicating that patients are receiving a consistent service.
Further Opportunities

Despite the remarkable improvements which have been achieved, a key concern is how to close the remaining 3% gap to reach the target. The predicted achievement in the 4 hour target by 2008 is based on the assumption that PDSAs will provide the means to continue improving in a linear fashion. However, we must be cogniscent of the possible need for step change in performance as we reach closer to the target. Indeed the projection assumes that the current system design is capable of achieving the desired outcome and this is not something which is known. Whilst great strides have been made due to the diligence, creativity and innovation of the teams, we must be mindful of what is required to close the 3% gap remaining to achieve the 95% target set. Monitoring of the projected trends is essential to understand sustainability and further replication of the approach. Degradation of improvement reached today and the possibility of the law of diminishing marginal returns may mean that progress is not linear and as the target becomes closer further support may be necessary, especially considering increases in attendance profiles, changes in flows associated with Out of Hours providers and Delivering Emergency Care (Welsh Assembly Government; July 2006).
Similarly although buy-in was clear from front line staff and from a majority of senior leadership, some managers and clinicians less closely involved in the programme were not as supportive. Collaborative working has been widely written about as a positive methodology to change but there are also several issues which need to be addressed including the difficulty of engagement and changing the mind sets of health communities to enable them to feel empowered to implement change and improvements and to share their good practice with other health communities. From the stakeholder views some key issues were raised that NLIAH will need to address in future programme design including the need for greater engagement in the programme by middle management and clinicians in particular. Kraines (2001) emphasised that in order for the team to be supportive there is a need for the manager to be engaged and lever the qualities of engagement and alignment within their team. Certainly, WECAC stakeholder views suggest that some middle management and clinicians were unsupportive of the WECAC programme and in these cases there was a lack of leverage to support the work of the programme manager. This issue will need to be resolved to sustain process improvements and will be supported by NLIAH in forthcoming programmes such as Skills4Change and the Clinical Leadership Network.

Further work is required on measurement systems being used to understand what proportion of improvement is attributable to the measurement system itself and what could relate to improvement in processes. This is a general concern across the NHS in the United Kingdom. This could possibly be achieved using measurement systems analysis and may be a valuable area of future work for Welsh health communities.

In some ways, as identified by a local health community in the programme evaluation, the Collaborative was ahead of its time. The Collaborative highlighted the importance of bringing together interactive and continual problem solving, linking actions to outcomes and continuous questioning of processes and assumptions. These had been addressed before, but this was one of the first all Wales initiatives with strong Ministerial backing and clear outcomes. The feedback indicated that had the Collaborative begun today, there are now forums for discussion and process networks currently operating that would have enabled a smoother and even more successful implementation. This bodes well for sustaining improvements - if more support mechanisms are currently in place than when the programme started, it can be expected that the communities will be able to draw on these resources as necessary. As Suzanne Wyatt, Clinical Lead, Bro Morgannwg said about the programme:

‘We’ve come out the other end older and wiser’

It would be a lost opportunity if the learning achieved from the many enthusiastic and able contributors to the Collaborative could not be sustained by future programmes.
Conclusion

WECAC was one of the first Collaboratives to be run in Wales and was an ambitious multi-organisational national programme which delivered key improvements across the emergency care access system in Wales to the benefit of both patients and staff. It is important to consider the timing of the Collaborative in relation to notable events and extraneous impacts.

There were increasing delays in Wales’ EDs and adverse publicity particularly in comparison to recent improvements in ED performance in England. There were new developments such as the new GMS contract, the introduction of Out of Hours Services and increasing ambulance usage. There had been some uncertainty in the service about policy direction and the funding of specific initiatives. These problems created delay in some areas in the appointment of Programme Managers to the Collaborative.

The Collaborative has been successful in its purpose. Whilst delivering the primary objective, to improve emergency care access for patients by reducing waits and delays across the system, the Collaborative has resulted in a number of additional tangible achievements.

The improvements in delivery against the four hour emergency access target can be attributed to different systems and processes being instigated which have resulted in improved performance and offset the increased pressures from rising levels of attendance.

Change in performance against the four hour target has varied across the communities, the level of change in performance being inversely proportional to the baseline performance. The result is that service performance is more consistent across Wales.

New ways of thinking about and managing the patient journey have been effectively introduced and the results demonstrate how effective the Collaborative style of working can be, with staff empowered to think more broadly, able to test assumptions, introduce sustainable change and share best practice. Front line staff with support from senior managers were key to the remarkable results. Sustainable ideas have been produced and staff were open to change as demonstrated by their innovative thinking.

Informal networking opportunities through national learning events have supported learning transference to ensure sustained problem solving throughout the organisations, motivating staff to apply learning and improve performance. A wide range of stakeholders have engaged in the work of the Collaborative. There is acceptance that there is a need to align improvement work of front line teams to operational targets.
Qualitative and quantitative tools and techniques used have improved the depth of understanding and provided context in individual health communities plans for improvement. Evidence suggests that these tools and techniques will continue to be utilised supporting communities in the measurement of success and review of performance. We have new stories and robust statistics to demonstrate the possibilities for improvements which are patient centred.

The national and local measures implemented have the potential, if further developed and utilised, to support organisations and their partners in setting robust internal (where appropriate) and whole system targets (both short and long term), linked to action plans and for scrutiny in monitoring performance and benchmarking with other sites. The action plans include evidence based activities which when applied systematically and used as part of a consistent and robust performance management system, led to improvements in delivery.

Sustainability was one of the major goals of the Collaborative; a significant number of communities remain committed to the principles of the programme and are actively facilitating staff in their efforts to effectively continue problem solving.

The Collaborative has raised the profile of emergency care and there is clear recognition of the need for greater partnership working between organisations via emergency care networks.

Health communities have a greater understanding of the present problems, potential solutions and the need to change to further improve care of the patient seeking urgent and emergency care. Opportunities to deliver whole system improvement have and continue to be realised by local health communities.

In summary the patient is receiving more consistent services across Wales and the results show there is an increasing capability and capacity within health communities to build upon the work of the Collaborative with further actions to achieve both SaFF and local targets.

The proposed NLIAH Unscheduled/Emergency Care Programme will build upon the work of WECAC and seek to support the continued improvement in performance and the quality of patient care. It will provide bespoke support for each participating health community in the development of a whole system approach as well as supporting Delivering Emergency Care (Welsh Assembly Government; July 2006).
Appendix One

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

Welsh Emergency Care Access Collaborative
2004 - 2005

National Steering Group

Terms of Reference
Background
The NHS Wales Management and Innovations in Care Board have agreed to support the development of an Emergency Care Collaborative to improve access to services as a programme of work for 2004-2005.

1) Terms of Reference: National Steering Group
The Steering / Expert Group is appointed to:

1. Take overall responsibility for the project and oversee the work of the local project teams.

2. Ensure the development of the Collaborative to support a more integrated and effective emergency care service.

3. Act as a source of expert advice to local programme managers and clinical leads in Collaborative sites.

2) Composition:
The Steering / Expert group is composed of representatives of key stakeholders within the Welsh Assembly Government and external partners as follows:

Chief Medical Officer
Chief Nursing Officer
Emergency Pressures Lead
Royal College of Nursing
Royal College of Physicians
Royal College of Surgeons
Royal College of General Practitioners
Royal College of Paediatricians
Director Innovations in Care
Associate Director Innovations in Care
Director NHS Direct

4) Objectives
The National Steering Group will:

a) Agree and set the national outcome measures for the Welsh Emergency Care Access Collaborative.

b) Set and monitor the national strategic direction of the Collaborative.

c) Provide guidance, leadership and expert advice for Collaborative sites.

d) Review and evaluate local Collaborative team measures within the context of national and local strategic agenda.

e) Promote the objectives, aims and values of the Welsh Emergency Care Access Collaborative.
5) **National Measures**

The national objectives /outcome measures of the Collaborative will be:

1. Service and Financial Framework Emergency Access Standards 2.1 – 2.5
2. The Development of Emergency Care Facilities and Services
3. Event / Call / Door to Needle Time – Thrombolysis (Welsh National Service Framework standard 3 - action point 16)

6) **Resources**

A budget of £1.5m has been levied against the Collaborative for this year; a further 500k has been highlighted in Innovations in Care budget planning for 2005-2006.

7) **Constraints**

New Deal Compliance
Unfinished Business
ED Medical Workforce Consultant / Staff Grade Vacancy Factor
Out of Hours Service Provision
Casemix / Demographic Changes
Expectation
Financial Position
European Working Time Directive
Recruitment

8) **Reporting Structure**

The Steering Group will report directly to the Director of Innovations in Care.

9) **Deliverables and Timing**

**Meeting Schedule**

a) Collaborative Steering Group Meetings will take place no less than 4 times during the Collaborative period.

b) Full detailed and comprehensive minutes will be recorded at each meeting

c) Agenda and minutes will be circulated to the membership at least 2 weeks in advance of meetings

10) **Related Issues**

**Links with Strategic Review of Emergency Care Services**

With regards to the strategic review of Emergency services, a Project Board has now been established by the Welsh Assembly Government with a Project Team to carry out the detailed work, which in turn will use specific working groups. The Project Team will make recommendations to the Project Board on a strategy to underpin the action needed and by when, for the future integrated strategic provision of emergency care services in Wales, taking account of the additional financial, workforce, training, information and infrastructure requirements. Two working groups will be established to consider Pre-hospital Care and Hospital Care.
11) Communications Strategy
The function of the communication strategy is to ensure that all stakeholders receive clear messages and reports about progress in the Collaborative.

Stakeholders will be asked to nominate someone in their organisation that will receive and distribute within that organisation regular updates and other relevant documentation received from the National Team.

The Secretariat of the National Team will regularly update the Regional Offices, Local Health Boards and other stakeholders by means of monthly reports and will encourage that these are disseminated widely throughout these areas. Consideration will be given to developing a website.

Links will be fostered with the other countries of the UK who are also developing new initiatives and good practice within emergency care services. Communications with the other countries will again be achieved via the National Team members networks and links.

The following communication standards will apply for the National Team:

1. All minutes of meetings will be disseminated to steering group members (present or absent) within 3 weeks of the date that the meeting was held.

2. Agendas for future meetings will be disseminated to all invited parties at least one week prior to the appointed meeting date.

12) Completion Arrangements
On completion of the Collaborative an exit strategy for each participating health community will be in place with regards to ongoing projects and personnel. (Local, Regional – National Emergency Care)
Appendix Two

Team Self Assessment Score - Emergency Care Networks
Each team is asked to self assess each month against the self-assessment scale below each month for the development of Emergency Care Networks (ECN), throughout the Collaborative period. Evidence for the score that is given should be provided on the monthly report. These scores will be periodically externally validated using the evidence on the report.

The ultimate aim of the programme is to reduce waits and delays and improve the patient and carer experience of emergency care. The scale acts as a proxy for that, so that if each team scores 4 or higher by the end of the project we can be confident that the programme will have achieved its aims.

The purpose of the self-assessment score is to:

Enable teams to assess their progress in relation to the rest of the Programme
Act as an indicator for the progress of the network development national measure

Assessment Score Criteria

Score: 0 (Starting Line)
- No Network arrangement
- No communication between key stakeholders
- No network forum in Emergency Care

Score: 0.5

Score: 1 - (Early work)
- Key stakeholders engaged
- Commitment secured to meeting / forum
- No forum / network meeting scheduled
- No changes
- No results

Score: 1.5
Score: 2.0 - (Activity but no changes)
- Local Emergency Care Network in place
- Key stakeholders included in membership
- Terms of reference agreed
- Chairman identified
- Regular monthly meeting schedule agreed

Score: 2.5

Score: 3.0 - (Modest improvement)
- Local Emergency Care Network in place
- Key stakeholders included in membership
- Agenda items agreed
- Regular monthly meeting scheduled
- Reporting mechanism in place

Score: 3.5

Score: 4.0 - (Significant progress)
- Involvement in regional Emergency Care Network
- Regional network meeting quarterly
- Fully established membership of key stakeholders

Score: 4.5

Score: 5.0 - (Outstanding sustainable results)
- Fully established national Emergency Care Network
- New ways of working fully implemented
- Activity recognised as leading practice nationally
- Evidence of sustained improvements on run charts
## Directory of Contacts / Programme Managers

<table>
<thead>
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<th>Role</th>
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1 FINAL REPORT

1.1 Introduction
Neath, Port Talbot, Bridgend and the western Vale of Glamorgan was known locally as the Bro Morgannwg Emergency Services Transformation programme (BEST). The local approach included:

- Strong clinical lead – considered essential
- Dedicated programme manager, with specific training in PDSA/analysis
- Executive sponsorship of the programme – to ensure high profile within the Trust
- Clear designation of the senior manager responsibility for success of the programme
- Clinical input in key areas – again essential for joint working
- Specific range of targets (both national and local)
- Communication strategy – using baselines, outcomes, performance against targets via group meetings, newsletters, website, reports to Executive and Trust Board

The programme ceased in its original format at the end of September 2005, when funding for the Clinical and programme leads expired. Any work associated with the programme thereafter was directly by relevant Directorates, making this part of “core work” rather than an “extra”.

1.2 Work streams
A total of 32 targets were set, with several of these instigated locally. Through the programme, it is clear that progress was made in all of these areas, and despite a dip in January – March which was experienced across the whole of Wales, the improvement has continued against previous years – in many cases by more than 10%:

- Compliance against 95% target improved;
- Percentage of patients receiving thrombolysis within 20 minutes increased
Percentage of patients with fractured neck of femur admitted to hospital bed improved dramatically

Medical outliers reduced significantly

SAPhTE scores below 18 increased

Increase in number of patients (#NoF) receiving analgesia within 30 minutes increased

Increase in percentage of patients receiving specialty referrals within 1 hour of referral/arrival

Reduction in the number of follow-ups / revisits

The PDSA methodology was used widely, from PDSA's lasting 2 hours to those lasting 14 days. This gave opportunities to staff to trial new ways of working in controlled environments, and from this work the vision for a Clinical Decision Unit became apparent. Changes as a consequence included the access to diagnostics, changes to streaming of patients in the A&E Departments, development of certain pathways, changes to the way in which the acute care physician works.

The Trust has secured funding to make physical changes which will further enhance the process changes already made. It is therefore true that though the BEST programme has finished as a project, other programmes have been instigated as a consequence. The input and impact of changes to Information Systems has been significant. These were first introduced during the programme, but work is still ongoing in refining the systems further. Another highly successful use of the clinical lead, programme manager and other clinicians were the audits undertaken throughout the hospitals – these identified whether there were delays in processes further down the patient flow – this ensured that others understood their input into meeting a target which may otherwise have been identified as one which was owned exclusively by the A&E/LAC Departments. The links with other groups was felt to be essential in respect of this, for example, in utilising the G Grade development programme to look at processes which could be improved at ward level to release capacity earlier – empowering staff to make changes in their own areas, and commencing a reconfiguration of wards within the Princess of Wales Hospital to ease flows.

An exit strategy was approved by the Management Executive in September 2005, which identified responsibility for ensuring that the success of the process changes continued. Many of the introductions in terms of team work have been maintained, for example, breach meetings, reports to management Executive and Trust Board, updates on changes. Though it is acknowledged that there is more work to be undertaken (especially in the light of continuing rises in attendances at A&E Departments), the health economy is entering an exciting time where other major projects have been launched which will again potentially impact on the patients flow and access to emergency services, for example, Integrated Services programme, the development of the Clinical Decision Unit and the Primary Care Collaborative.
2 PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Bro-Morgannwg baseline average performance against the four hour target was 93.1% and would normally be between 86 & 97% every week with an average week to week change of 2% ranging between 0 & 6 %.

Figure 1: An Individuals Moving Range SPC chart showing the weekly Bro-Morgannwg Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.

2.1.2 KPI 2: Thrombolysis Target
Bro-Morgannwg consistently reported the Thrombolysis figures, but did not show a statistically significant change during the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score saw two changes, initially increasing to 3 in October 2004, then a step increase to 3.5 in May 2005.

Figure 2: A plot of the monthly reported network scores
2.1.4 KPI 4: Fracture Neck of Femur
Bro-Morgannwg consistently reported the Fracture Neck of Femur figures. No statistically significant changes were seen through the Collaborative, except 4d (Page 21) which indicates a step improvement.

2.2 Local Measures
Bro-Morgannwg reported local measures in all work streams. Although the local measures were regularly reported, no statistically significant change was seen.

Table 1: Local Measures

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2.3 PDSA Cycle Registers
The PDSA register was reported monthly by Bro Morgannwg:

Figure 3: PDSA Cycles by Work stream

Figure 4: Number of PDSA Cycles by area

In total 55 PDSA Cycles were reported during the programme.
1 FINAL REPORT

1.1 Introduction
This report outlines the Trust position at the end of the WECAC Programme and the ongoing actions being taken forward to reach and sustain the 4 hour target.

1.2 Work Streams

1.2.1 Emergency Department
The Emergency Unit work was aligned with the application of the theory of constraints methodology. Initially focusing on the collection of data, subsequent work was undertaken on breaches which had on occasions been in excess of 50 hours (wait for a bed) and breaches due to EU clinicians. PDSAs have resulted in improvements which include:

- Reduction in the SAPhTE score
- Improvement in the 8 hour trolley waits
- Introduction of the Navigator system in A&E and regular “live” buffer meetings which have been instrumental in driving forward a change in culture across the unit and staff are far more aware of their responsibilities in “progress chasing”
- Daily live buffer (breach) meetings
- Implementation of a Majors Assessment Team
- A dedicated portering service

However there have been disappointments as despite good progress the 4 hour target proved impossible to meet on a daily basis partly due to volume of both major and minor patients impacting on capacity within the unit and delays “further up stream” such as bed capacity. However it can be seen that a steady increase in performance occurred during the programme.

1.2.2 Acute Assessment
Work concentrated on improving the flow and bed availability by:

- Improving the journey time from arrival to the time a decision is made to admit/transfer or discharge for surgical patients
- Reducing the time a patient waits for transfer to a ward bed from a base line defined by specialty
- Increasing the number of discharges occurring before 11am from a defined baseline by specialty, most notable in T&O

Whilst the above PDSAs were relatively successful, bed availability continued to be a significant issue.
1.2.3 Primary Care

In common with other organisations the engagement of General Practitioners in the Primary Care work stream was limited. The group ceased in September 2005. Work up until that point focused on:

- Examining and resolving communication issues around the referral pathway. Work focused on improving information to GP in regards to alternative services and identifying the pathways with the aim of streamlining.

- Reducing the number of patients admitted for change/blocked catheters. The PDSA cycle identified a 60% reduction in the numbers attending. This reduction has been sustained over the months.

- Working with the Ambulance Trust to reduce the number of category C patients from Barry area who are currently seen and treated in UHW. This is a protocol driven service which has resulted in a reduction in ambulance journeys.

- Working towards developing a single point of access via bed bureau. Several PDSAs identified that the Bed Bureau could easily undertake this role. This work will now be taken forward as part of the Emergency Care Improvement Plan.

Early in the Collaborative, the local Emergency Pressures Partnership Board was reconfigured to incorporate the local network with revised terms of reference. The process was initially time consuming and whilst the Board had strong representation there was a need to renew the focus of the agenda. In December 2005 the Unscheduled Care Partnership Board was formed with a revised membership and agenda.

1.3 Progress

The Trust recognises that there is still a significant amount of work to be done in order to reach and sustain the 95% target. More recently the Trust has undertaken further work implementing the Theory of Constraints discharge project across the whole of the Trust. This has seen significant improvement in delays due to “Waits for a bed”. Most of the wards have also introduced Predicated Date of Discharge. Bed management arrangements have been strengthened and an 8.30am buffer meeting/bed management meeting takes place on a daily basis, chaired by a General Manager and attended by a representative from all bed holding directorates and EU staff. Further meetings take place during the day.

The Trust is currently working through an Emergency Care Improvement Plan. Patient flow has been reorganised through dedicated pathways and now includes a dedicated 14 spaced Surgical Speciality Assessment Unit, and a dedicated Medical Assessment Unit with a mixture of beds, trolleys and chairs. Medical patients are defined as short stay, long stay or specialist and are transferred to the most appropriate place or discharged directly form the Unit.

The Emergency Unit has introduced See and Treat and has seen a significant improvement in waiting times although some further work is still needed to maintain 100% of minors seen in 4 hours.
1.4 Local Evaluation
The WECAC at Cardiff and Vale has been successful in that it focused hearts and minds on improving emergency care across the Trust. It enabled greater partnership working within the service groups across the Trust. Unfortunately the primary care work stream was not as successful. However more recently there is evidence to support far greater partnership working with LHB’s and Social Services with joint meetings taking place and led by an Executive.

The 4 hour target was not achieved and maintained consistently throughout the project however recent work and a new model of emergency care across the Trust has seen further improvements against the target and an improved patient pathway.

2 PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Cardiff and Vale baseline performance against the 4 hour target was 83.1% and could normally be expected between 79.2% and 87%. Average weekly change was 1.5% but could be as high as 5%. Over the Collaborative Cardiff and Vale saw a significant increase of 6.4% to 89.6%

Figure 1: An Individuals Moving Range SPC chart showing the weekly Cardiff and Vale Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.

2.1.2 KPI 2: Thrombolysis Target
Cardiff and Vale consistently reported the Thrombolysis figures, but have shown no statistically significant change through the Collaborative.

2.1.3 KP1 3: Self Assessment Score
The emergency care network score has seen several step changes through the Collaborative, initially in December 2004 to 2.5, followed by 3 in February 2005. In April 2005 this increased to 3.5 with a final increase in February 2006 to 4.
2.1.4 KPI 4: Fracture Neck of Femur
Cardiff and Vale consistently reported the Fracture Neck of Femur figures. These have shown no statistically significant change throughout the Collaborative.

2.2 Local Measures
Cardiff and Vale reported local measures in all work streams. Although the local measures were regularly reported, none show any significant change.

Table 1: Local Measures

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</table>

2.3 PDSA Cycle Registers
The PDSA register was reported monthly by Cardiff and Vale:

Figure 3: PDSA Cycles by workstream
In total 60 PDSA Cycles were reported during the programme.
1.0 Final Report

1.1 Introduction
As a direct result of local implementation of the Collaborative methodology Carmarthenshire NHS Trust has been successful in improving it’s year on year performance against the Wales SaFF target for waiting times in Accident and Emergency Departments.

The improvements secured are not yet sufficient to provide sustainability particularly at times of peak pressure. Although many changes in practice have been implemented, the Trust continues to pursue the outstanding points on the action plan. Additionally following an informal DSU review of local emergency care pathways further actions were identified to help secure improvement in local Emergency Care Pathways. A revised action plan has now been developed. The action plan will be formally monitored and progress against the agreed actions will be reported to the Trust Management Team, Trust Board and Regional Office.

1.2 Work streams
The Primary Care Team continues to meet monthly to progress and monitor the development of schemes that provide alternatives to hospital admission and support early discharge. The Accident and Emergency Care Team are also continuing to meet monthly. The team ensures that progress is made against the relevant points on the action plan and monitors performance via the monthly A&E breach reports.

The work programme of the Acute Assessment Team will now be driven via the Trust Management Team which has approved the revised action plan. The team will monitor progress against it at monthly intervals. The Trust Management Team will report directly to the Trust Board.

A Project Board was originally established at the outset of the Collaborative bringing together partnership organisations to address issues related to admission avoidance and early discharge. However a number of forums were already in existence that included members and agency representatives from the relevant primary and community services organisations. Following revision of the action plan it has been agreed that it will now be progressed on the agenda at the following previously existing forums.

- Carmarthenshire Health Social Care and Well Being Modernisation Board
- Carmarthenshire Health Social Care and Well Being Secondary Care Commissioning Board
- Carmarthenshire Joint Executive Forum
1.3 Local evaluation
Participation in the emergency care Collaborative has been a positive experience in Carmarthenshire. There are many areas of the programme from which the Trust has benefited including

- Raising the profile and awareness of the 4-hour target, generating Trust and health community ownership of the problem
- Promotion of communications between agencies locally and on an all Wales basis, improving networking opportunities and gaining Ministerial attention
- Focussing minds on the problems associated with accessing emergency care and providing opportunities for time out to think about and plan work programmes effectively
- Creating consistency in reporting methods and patient management processes

In particular programme managers benefited from having protected learning time. They were able to develop an appreciation of how Trusts work in different ways, and learn and share new ways of working.

1.4 Barriers to implementation
Within the local health community barriers and resistance to new ways of working have been experienced. At the outset speciality services did not acknowledge their role in relation to emergency care pathways and the impact and influence they could exert on the 4-hour target. Clinical engagement was difficult to secure, as the benefits for all patients both elective and emergency were not acknowledged. Lack of functional local data collection systems hindered early work. It was recognised early in the programme that robust process information was required to identify the causes of delay in patient journeys and measure the impact of any remedial action taken. The most significant influence on introducing the changes required to improve access to emergency care at both a national and local level were the competing priorities between Financial, Elective and Emergency Care Targets.

1.5 The programme managers experience
Project managing the Collaborative programme has provided individual project managers with new skills, particularly in relation to data collection, measurement and analysis. Additionally it has enabled them to understand in detail all processes related to patient flow through the Health and Social Care Community thereby broadening the understanding as to why a whole systems approach to managing health care is required now and in the future.

2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Carmarthenshire baseline average performance against the four hour target was 90.5% and would normally be between 84.3 & 96.7% every week with an average week to week change of 2.3% ranging between 0 & 7.6%.
2.1.2 KPI 2: Thrombolysis Target  
Carmarthenshire consistently reported the Thrombolysis figures, but have shown no significant change throughout the Collaborative.

2.1.3 KP1 3: Self Assessment Score  
The emergency care network score has been gradually increasing up to 5 during the Collaborative.

2.1.4 KPI 4: Fracture Neck of Femur  
Carmarthenshire consistently reported the Fracture Neck of Femur figures. These have shown no significant change throughout the collaborative, except 4a (Page 21) which indicates a step reduction.

2.2 Local Measures  
Carmarthenshire was reporting local measures in all work streams. Although the local measures were regularly reported, only two showed any significant change. The measures reported are listed below.
Table 1: Local Measures

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Significant improvements were seen in the following:

- Average Length of Stay of Acute Medical Patients in Prince Phillip Hospital
- Reduction in the monthly average DToC figure to below 20 per week

2.3 PDSA CYCLE REGISTER

PDSA register reported monthly by Carmarthen were as follows:

Figure 3: PDSA Cycles by workstream

- Primary Care: 82%
- Emergency Department: 12%
- Acute Assessment: 6%

Figure 4: Number of PDSA Cycles by area

- Information and Data: 10
- Patient Pathway / Flow: 19
- Role redesign / change: 16
- Miscellaneous: 4
- Co-location / Allied Health Professionals: 2
- Pharmacy and Medicine Improvements: 9

In total 17 PDSA Cycles were reported during the Collaborative.
1. FINAL REPORT

1.1 Introduction
Ceredigion and Mid Wales NHS Trust provide acute and community health care in a geographically remote area of Wales which is sparsely populated. The Programme is encompassed under the umbrella of the Unscheduled Care Group which is LHB led. There are two patient pathways into the Trust

■ G/P referral
■ Emergency

All A&E and EAU patients are in the same system and counted, having a ‘virtual’ EAU. This poses a greater challenge than for other Trusts, because treatment and discharge/admission for EAU patients can take several hours and it is known from detailed analysis that the four hour waiting time is breached by EAU patients. The Trust has risen to the challenge and is attempting to bring all admissions within the four hour waiting time and will be the first Trust in Wales attempting to do so. The sustainability plan is comprehensive, inter-Directorate, revolutionising the way in which the Trust care for patients through a whole systems approach

1.2 Work streams

1.2.1 Primary Care Stream
■ Organisational barriers to change identified
■ Turn around times reduced
■ Agenda management to look at A&E, OOH, Reablement, and District Nursing continued as an agenda item through the Directorate structure with the permanent appointment of an Unscheduled Care Manager
■ Fully integrated OOH service located in A&E department with OOH G/Ps employed by the Trust
■ OOH G/Ps working in A&E as and when needed which is written into their contract

1.2.2 Accident and Emergency
■ Reduction in > 4hr breaches
■ Training of 13 ENPs
■ Streaming of minor injuries
■ At escalation the A&E doctor will support clerking of EUA patients for the ‘on take’ team
■ Expansion of department dedicated to EAU and overflow
■ Introduction of bed management team
■ Establishment of Telemedicine between Bronglais Hospital and Cardigan Hospital MIU, and Bronglais Hospital and Morriston Hospital Burns Unit
Introduction of new Myrddyn A&E viewer

Standardising internal escalation system to match A&E viewer

A&E viewer rolled out to all Executives, Managers, and Departments

Robust A&E network in place

1.3 Future Work

1.3.1 Primary Care

Unscheduled care service should be delivered in the right place at the right time by the right professional resulting in fewer patients admitted to EAU, which would in turn provide a beneficial impact on waiting times for those patients requiring hospital admission. To achieve this it will be necessary to develop alternative models of unscheduled and ambulatory care in community settings.

The main goal is to reduce the waiting times and delays whilst improving patient care and the main focus of the Collaborative is to achieve high standards of patient care by sharing good practice and improving the patient journey and experience by involving the staff who deliver direct clinical care and wherever possible the patient in care redesign, to ensure that care provision will be patient centred.

Short term

- Establish what evidence supports the perception of increased number of avoidable admissions and also the size of the problem
- Consider carrying out a baseline audit to establish number of patients admitted who could have been either kept at home or discharged home with appropriate care package

Medium term

- Establish size and area of problem

1.3.2 Accident and Emergency

The Trust has analysed activity and has concluded that it is possible to change clinical practices so that safe and effective care can be provided that matches the variability in demand over 24 hours - in effect, maximising resources during the day and minimising them at night. This can be achieved with the resources released from the changes in clinical practice, and developing a new future model based on integrated unscheduled care in A&E. In addition to the changes within the hospital, this will involve reconfiguring the acute assessment unit, adding theatre capacity, developing the role of G/Ps and implementing a multi-agency crisis centre.

The main benefits will be as follows:

- Development of seamless working across the acute and primary care interface in the out of hours service
- More efficient rotas with adequate staffing to cover the workload peaks and troughs resulting in improved levels of staffing and less onerous shifts. Better management of activity through the 24 hour period will enable night resources to be diverted to the daytime which will facilitate improved cover
Development of shared protocols with other units, expansion of the use of telemedicine and the inclusion of seasonal commitments in neighbouring Trusts and specialist units in the job plans of new consultants. This will enhance the development of clinical networks and the ability to fill vacancies.

Improved assessment and diagnostic skills to provide improved development opportunities.

Training opportunities will be maximised during times of high activity which will increase the quality of training and exposure to clinical procedures.

1.4 Issues and Opportunities

Information/data collection
At the beginning of the Programme all KPI’s had to be collected manually, due to the Trust’s IT infrastructure. Whilst this was very time consuming it was actually a very valuable exercise because it gave a greater understanding of the information we collected and what could be done with it. We also gained a much clearer understanding of what actually went on within the A&E department and how it functioned as opposed to individual perception and anecdote. As a direct consequence of this work, an A&E viewer has been introduced into the department which has been rolled out to all Executive Directors and Directorate Managers.

Bed Management
As a direct result of the WECAC Programme a multidisciplinary bed management team was set up and meets on a fortnightly basis and feeds into the Unscheduled Care Group. The team consists of Directorate Managers, Bed Manager, Executive lead, Social Services, Modernisation Manager, WECAC facilitator, Unscheduled Care Manager, Discharge Liaison Nurse, and Discharge Liaison Nurse Powys Trust. In addition to this meeting there are daily bed management meetings on an ‘as and when’ basis. There is a robust escalation policy in place.

Regional A&E network
The Trust is part of a robust regional network which meets on a quarterly basis, areas covered include;

- Clinical Risk
- Sharing clinical incidents
- Lessons learned
- Sharing of data (including WECAC data)
Integrated OOHs Service
This service works extremely well and is located inside the A&E dept. The G/Ps are employed by the Trust and in addition to working in OOHs the G/P also work in the A&E department. The drivers for the G/Ps work in the A&E reception when not out on a call. All patients come through one door within the department and are triaged at reception; if the patient requires primary care intervention then they are referred across to the OOHs team.

Closer Working Relationships
Throughout the Programme the Trust, LHB and Social Services have fostered closer partnership working particularly in the formulation of care pathways, and discharge policies and procedures.

Discharge procedures
During the Programme it became evident that as a Trust we needed to improve on discharge procedure and implement Estimated Date of Discharge. A discharge lounge was introduced into the Trust in March 2005 and the intention was to improve our discharge procedures to enable us to discontinue using the discharge lounge as soon as possible. Our discharge procedures have now improved significantly and we aim to have all discharges before 11am. There is still some way to go however.

Accurate Completion of Documentation
An ongoing issue for the department is that the A&E cards are poorly completed by medical and nursing staff and this is something we continue to work on.

Whole Systems ‘Buy In’
Within the Trust the WECAC Programme was widely seen as an A&E Programme and it was very difficult to get ‘whole systems buy in’, however, this is improving. In retrospect we may have had a greater understanding of the Programme if we had ‘launched’ it Trust wide with the support of NLIAH.

Programme Manager and Extension of Programme
Without doubt the loss of the Programme Manager part way through the Programme was an issue and had we realised that the intention was to extend the Programme for an additional six months then the Trust would have considered appointing or seconding another full time Programme Manager, rather than the Modernisation Manager taking on the role.

2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Ceredigion baseline performance against the 4 hour target was 96.2% and could normally be expected between 88% and 100%. Average weekly change was 3% but could be as high as 10%.
2.1.2 KPI 2: Thrombolysis Target
Ceredigion consistently reported the Thrombolysis figures, but have shown no significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has consistently remained at 3 throughout the Collaborative.

2.1.4 KPI 4: Fracture Neck of Femur
Ceredigion consistently reported the Fracture Neck of Femur information but no significant change was seen during the Collaborative.

2.2 Local Measures
No local measures were reported
2.3 PDSA Cycle Registers
PDSA register was reported monthly by Ceredigion reflected the following results:

**Figure 2: PDSA Cycles by Workstream**

In total 13 PDSA Cycles were reported during the programme.

**Figure 3: Number of PDSA Cycles by area**
Conwy and Denbighshire Contact: debbie.murphy@cd-tr.wales.nhs.uk

1. FINAL REPORT

1.1 Introduction
Conwy and Denbighshire NHS Trust and Health Community remains committed to service improvement and redesign to achieve and sustain the 95% A&E target. As from April 2006 the Executive responsibility for Emergency Care transferred from the Executive Director of Operations within the Trust to the Executive Director of Nursing and Midwifery. This provides an opportunity to build on the stepped improvement in performance since the launch of the WECAC Project and drive forward further service redesign from a clinical perspective to achieve and sustain 95% A&E performance. As part of this transfer of Executive responsibility, bed management and discharge teams have since been strengthened as part of a newly formed Patient Flow Team which reports to the Deputy Director of Nursing and Service Improvement as Trust Operational Lead.

Previous Emergency Pressure Groups have now merged into one committee, which will maximise efficiency of time, reduce duplication and provide a focused forum for the health and social care community to develop strategies for further improvement. This newly formed group titled Unscheduled Care Steering Group is chaired by Mrs J Galvani, Executive Director of Nursing and Midwifery / Executive Lead for Emergency Care within the Trust.

1.2 Issues and Opportunities

Data & Information
The data and information developed and refined during the WECAC project will continue to be presented to the Unscheduled Care Steering Group. This data will also inform the Trust Performance Report including quarterly and final reviews to Regional Office. Key to the improvements during the WECAC Project has been the use of information, data analysis and the ability of the project to promote new ways of analysing information, as a result we have seen a move from one figure a month being reported to the Trust Board to a more detailed approach. This has encouraged a more proactive approach to information reporting, with many new reporting systems developed through the lifespan of the project. These reports are now part of everyday life for the Divisions. This is an area that will continue to be developed as it is seen as vital to sustainability.

The Trust has made significant progress towards the 4 hour A&E target. Since the completion of the WECAC project improvements continue with the 4-hour target achieving 93%, 94% and 94% for April, May and June 2006 respectively and variation remaining within the range 88% to 97%. This continued performance indicates that the project introduced a sustained improvement in the emergency flow, which has continued beyond the official project timeline.

1.3 Action Plan / Future Work

1.3.1 Future Work
It was acknowledged during the latter stages of the WECAC project that in order to achieve and sustain performance of the 95% A&E target, the Trust will need to prioritise the following:
Medical emergency readmissions
Admission Avoidance
Transfer & Discharge improvements
Modernisation of Community Hospital Beds
Redesign of District Nurse Service
Integration of Intermediate Care
Management of Long Term Conditions

The Trust regards this work as high priority and these key projects are currently being managed through the Trusts Service Change Efficiency Plan (SCEP). The following two Service Change Efficiency Plans are seen as key schemes which will redesign patient flow:

**SCEP 1**
The introduction of admission avoidance schemes and reduced length of stay through the combined impact of a range of specific initiatives (PDSAs).

**SCEP 2**
The review and remodelling of unscheduled care services in Conwy & Denbighshire focusing primarily on the integration of A&E, Acute Medical Unit and GMS Out of Hours Service.

**1.3.2 Divisional Merger**
As from March 2006 the Division of Emergency and Integrated Medicine was formed. This revised operational structure integrated A&E services with the Division of Medicine, which has since improved communication across departments and resulted in greater ownership of the A&E target.

**1.3.3 Action Plan**
In addition to the actions indicated in this report that are currently in progress to sustain and further improve performance, a visit and subsequent report from the Delivery and Support Unit (DSU) who visited the Trust by invitation during 2005. Accordingly an updated Action Plan was drawn up based on the DSU suggested recommendations. This Action Plan has been reviewed and will feature and report monthly through the Unscheduled Care Steering Group.

**2. PERFORMANCE**

**2.1 Key Performance Indicators**

**2.1.1 KPI 1: Four Hour Emergency Care Access Target**
Conwy & Denbighshire baseline average performance against the four hour target was 83.5% and would normally be between 75 & 92% every week with an average week to week change of 3.5% ranging between 0 & 11%. This improved to 92.51%.
2.1.2 KPI 2: Thrombolysis Target
Conwy & Denbighshire consistently reported the Thrombolysis figures, but these have shown no significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen two changes initially increasing to 3 then an increase up to 4 in April 2005, which has been maintained.

2.1.4 KPI 4: Fracture Neck of Femur
Conwy & Denbighshire consistently reported the Fracture Neck of Femur figures. These have shown no significant change throughout the Collaborative, except 4c & 4d (Page 21) which indicates a step improvement.
2.2 Local Measures
Conwy & Denbighshire was reporting local measures in all work streams. Although the local measures were regularly reported, only three showed a significant change.

**Table 1: Local Measures**

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Significant improvements were seen in:
- Average Arrival to Departure Time (Admitted) Hours
- Average Arrival to Departure Time (Discharged) Hours
- Data Quality - % Blank Departure Times

2.3 PDSA Cycle Registers
PDSA register reported monthly by Conwy and Denbighshire were as follows:

**Figure 3: PDSA Cycles by Workstream**

**Figure 4: Number of PDSA Cycles by area**

In total 18 PDSA Cycles were reported during the programme.
1. FINAL REPORT

1.1 Introduction
The most noticeable outcome has been the culture change within the organisation. It is now widely understood that the Performance Targets in relation to A&E trolley waits are everyone’s responsibility – they are not ‘front door’ focused but whole system, dependent on every step in the patient’s journey. There is also widespread acknowledgement that there is a need to actively collaborate with Primary Care and other agencies to create seamless interfaces for the patient to return into the community. There was an active focus on team development, with learning being the main theme.

1.2 Work-streams

1.2.1 Primary Care Group
The Senior Nurse for OOH led a project to establish a directory of Alternatives to Admission.

This resulted in:

- Directory being available to nursing and medical staff within OOH service
- Provides a quick reference to alternative services available in the Borough
- Directory being shared with Bed Manager who handle all GP calls
- Appropriate Primary Care alternatives to admission can be suggested

Rapid Response services were reviewed and work was undertaken in collaboration with the WAST to examine the feasibility of triaging ‘999’ calls with a view to offering alternatives to transporting the patient to an Accident & Emergency Department. An Emergency Care Practitioner is being despatched in place of an emergency ambulance to patients whose presenting symptoms meet agreed criteria. The ECP then triages the patient using agreed algorithms and offers the patient suitable alternative care access in place of attendance at A&E.

A scoring system has been developed to indicate if a patient may potentially become a delayed transfer of care. Patients with #NOF are being assessed on admission using the tool. The predicted outcomes will then be matched against the actual outcomes for the patients in the study.

1.2.2 Accident and Emergency
It was acknowledged that Senior Clinician support for the WECAC Programme was fundamental for any real improvement to be realised. Active Consultant involvement was secured from very early in the programme. Improved patient flow systems in the main hospital early on in the programme provided the space required for the A&E staff to identify and improve processes in the department.
Rationale for Changes:

- Undertaking process mapping facilitated an understanding of the flow through the department
- Improved breach analysis and sharing of the data obtained
- Knowledge of demand profiles for day of week and time of day
- Nursing and medical staffing adjusted to relate to demand profile
- Streaming of Minors introduced and protected
- Extended roles, in particular that of ENPs, introduced to reduced process steps e.g. nurse requested X-Rays
- New roles ~ Clerical Chaser
  Navigator Role – A&E/MAU and Surgery
- Upgraded IT system

Major bottlenecks and constraints were identified in the processes for A&E patients being referred for assessment to on-take medical & surgical teams, therefore:

- Patient flows were reviewed and changes made in both the referral and assessment processes
- Reconfiguration was undertaken in the MAU/Admission Ward area to accommodate early transfer of referred medical patients to MAU for assessment by the on-call medical team within the unit
- Working practices within the SAU were changed respectively to allow ‘fast-track’ transfer of surgical patients at the time of referral by A&E

Major redesign within the constraints of the existing structure has been approved as an interim measure, requiring decant into temporary facilities. The identified long-term strategies for the development of the department to make it ‘fit for purpose’ will be delivered when the Clinical Futures project is realised.

1.2.3 Acute Assessment

The difference in assessment processes on the three sites reflected the variation in a number of systems and processes that existed prior to commencement of the WECAC programme. It was decided that as there were identifiable separate patient flows there was a need for working on each flow individually. Workshops were undertaken on patient flows for medicine and surgery and changes introduced in response to outcomes. One of these changes was the creation of dedicated surgical assessment trolleys in the assessment unit. The PDSA methodology of the WECAC Programme was applied and the outcome led to a sustainable improvement. A PDSA was undertaken on GP call screening by a Surgical Consultant. Introducing GP call screening by Consultants in both surgery and medicine at Nevill Hall Hospital is currently in the early planning stages.

The use of a predictor tool to forecast daily demand based on historic data was introduced. The predictor tool is part of the sustainability programme and as such is subject to continuous evaluation and improvement. Site meetings are held every weekday morning facilitated by Bed Management. The meeting provides a forum to review the hospital issues over the previous 24 hours (or weekend) and plan forward.
Problem areas are identified and promptly escalated appropriately for investigation and action. The aim is to create a ‘Dashboard’ to identify potential problems early on. Development of the dashboard is well underway and is now providing indicators of potential problems in waits for investigations. Actions will continue to be taken in response to issues identified at these meetings.

1.3 Action Plan / Future Work
The Clinicians who joined the programme were enthusiastic and enjoyed the process overall. There has been mainstreaming of projects in these groups into existing and new programmes of work. This has streamlined and secured the sustainability of the improvement programme. The Out of Hours service is ongoing in its development, the focus being around Nurse Practitioners and their ability to provide alternative care, releasing GP time. At Nevill Hall Hospital the work of the programme will continue through the existing Modernisation Group (linked into Clinical Futures) and the Assessment Unit Project Group. Both are integral parts of the Site Development Strategy. At RGH the programme continues to be taken forward through the Emergency Care Directorate Team (merging the A&E Directorate Team and the MAU Development Team) and the Surgical Development Group.

PDSA is still very much a part of the methodology. New staff groups are being introduced to PDSA methodology. They are being supported in the use of PDSAs to introduce and manage associated changes. This forms part of the overall Discharge Project being led within the Trust by the Executive Nurse Director. The advice given by the Delivery Support Unit following their recent visit is being developed into new action plans. Performance Improvement has now progressed to the point where the remaining problems left to address are those that are the most difficult.

The importance of developing close working links between the Trust, LHBs and Social Care is increasingly being acknowledged. Joint working will enable all stakeholders to move towards achieving SAFF deliverables, emergency care targets and the financial recovery plan. Network links have been established in recent months across Health and Social Care, many being led by the LHBs. Pan-Gwent networking is being actively nurtured.

Future Work includes:
- Ongoing review and updating of current action plans for 4 hour target
- Development of Emergency Care network – Monmouthshire LHB chairing the Gwent Wide Emergency Network
- Momentum of change being sustained through mainstreaming improvements into everyday working and planning.
- Evaluation/improvement cycles continually being carried out - Daily Breach Analysis, Daily Site Meetings, Predictor Tool
- Improved discharge planning process being developed:
  - Introduction of Unified Assessment Documentation with appropriate training.
  - Introduction of EDD across Nevill Hall Hospital site.
  - Roll-out of EDD to remaining areas at Royal Gwent Hospital.
Introduction of Nurse-Led Discharge protocols.

Improving communication between Multi-Disciplinary Team on acute sites to facilitate effective discharge planning.

CEO led focus on identification and pro-active management of patients with extended lengths of stay.

Feedback into Pan Gwent Delayed Transfers of Care Group.

- Develop further streams in adult medicine, segmenting patients by length of stay, to improve patient management.
- Reconfiguration of inpatient bed designation to enable directorates to promote the booking of planned activity against agreed elective capacity and put in place internal escalate measures in response to emergency pressures.

2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Gwent baseline average performance against the four hour target was above 85% and would normally be between 82.5 & 87% every week with an average week to week change of 3% ranging between 0 & 7%. There was an improvement by Phase 2 to 91%.

Figure 1: An Individuals Moving Range SPC chart showing the weekly Gwent Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.
2.1.2 KPI 2: Thrombolysis Target
Gwent consistently reported the Thrombolysis figures, but have shown no significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen two changes first a step increase to 3, in May 2005 then a gradual increase up to 5 by the end of the Collaborative.

Figure 2: A plot of the monthly reported network scores

2.1.4 KPI 4: Fracture Neck of Femur
Gwent reported the Fracture Neck of Femur figures, but not consistently, and therefore there is not enough data to analyse effectively.

2.2 Local Measures
Gwent reported local measures in all work streams, although this reporting stopped in October/November 2005.

Table 1: Local Measures

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<th>Number Agreed</th>
<th>Number Reported</th>
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</thead>
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<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

2.3 PDSA Cycle Registers
PDSA register was reported monthly by Gwent:
In total 78 PDSA Cycles were carried out during the Collaborative.
1. FINAL REPORT

1.1 Introduction
A Programme Manager was appointed for NHS Direct Wales in April 2004. The objectives for NHSDW within the WECAC programme mirrored those in the NHS Direct Wales service plan and were:

- To improve the patient journey for patients who access emergency care in and from the community by means of integrations with A&E Departments.
- To improve the patients journey for patients who attend A&E departments and minor injury units
- To have greater patient involvement
- To explore opportunities for direct referral to secondary care
- To increase collaborative working with other health care providers

1.2 Partnership Working

1.2.1 Integration with A&E Units
Members of the public regularly ring A&E Departments for advice. These calls are answered randomly by whichever member of staff is available. This takes the nursing staff away from the clinical area and direct patient care. This can result in varying quality of the advice given and little continuity. NHSDW integrated with 3 A&E Departments – Morriston, Singleton and the Royal Gwent in order to support the departments with telephone triage. Members of the public ringing these departments for advice on a new clinical condition have their call transferred to NHSDW. NHSDW then provide call handling, nurse assessment, advice and information and signposting to the most appropriate health care provider or advise the caller how to care for themselves at home. If following assessment, the patient needs to attend one of these A&E departments then the patient record is electronically faxed to the hospital prior to the patients arrival and can be used as a pre hospital record.

The amount of calls received by NHSDW from these departments was relatively small so the impact on capacity was manageable within the existing service. It was therefore decided to extend the number of integrations with A&E Departments as part of the WECAC programme. The following sites were identified as areas where integration would have an impact:

- Prince Charles Hospital, North Glamorgan NHS Trust
- University Hospital of Wales, Cardiff and Vale NHS Trust
- Ysbyty Glan Clwyd, North West Wales NHS Trust

NHSDW has commenced this service for Prince Charles and Ysbyty Glan Clwyd and are finalising arrangements with University Hospital of Wales.
1.2.2 Collaborative Working

Welsh Ambulance Service Trust

Historically, the only access to ambulance transport available to NHSDW has been a 999 emergency vehicle. However, not all callers need an emergency vehicle therefore this has an impact on the ambulance service SaFF target for Category A calls. A pilot scheme giving access for NHSDW staff to urgent ambulance transport for callers assessed as needing to attend A&E but not requiring a 999 ambulance. This initiative is now fully operational across Wales.

Minor Injuries Data Base

As part of a joint project with WAST, NHSDW has provided each ambulance control direct access to the database containing detailed information regarding minor injury units across Wales. This enables WAST to check the services provided at a minor injury unit before taking a patient there, thus relieving the pressure on major A&E departments, saving unnecessary journey times for the WAST and allowing the patient to be treated locally.

Chronic Disease Management

A pilot scheme has been running in the Swansea area involving a team of nurses attached to GP surgeries with the overarching aim of preventing admission to hospital for patients with chronic disease. There is a potential, after the upgrade of the CAS software system for patients of the Chronic Disease Management team to be identified as ‘special patients’ if they access NHSDW. This would ensure that the agreed care pathway for these patients was followed after assessment by NHSDW with the potential to refer directly to the chronic disease management team and prevent unnecessary attendance at A&E departments and subsequent admission. This work remains ongoing.

Face to Face Software

It was identified that Powys MIU nurses would benefit from having a software system similar to that used by NHSDW nurse advisers. Such a system would provide them with a robust, safe method of assessing patients attending their units. A demonstration of CAS walk-in centre software was arranged and the feedback from the lead nurse was extremely positive and arrangements were made for her to visit a walk-in centre in England where the system is in use. This work remains ongoing.

Information on Community Services

Information on types of calls handled by NHSDW for callers contacting NHSDW from the Carmarthenshire area was requested by the WECAC Programme Manager from Carmarthen. A visit to the call centre took place and information on the top ten symptoms, age, gender and call type was provided. This work remains ongoing through the NHSDW Health Information Team.

Early Response Team

The Bro Morgannwg early response team targets all persons over 65 who fall within a set patient criteria list. A visit to NHSDW call centre was arranged for the multidisciplinary team. A demonstration of the software system was given. There was particular interest around provision of information and direct referral to the team after nurse assessment. Information regarding the remit of this team and criteria for patient
inclusion has been given to NHSDW health information team and advice on how to access information from NHSDW given to the Early Response Team.

1.2.3 Patient Involvement

Patient Stories and Service User Postal Survey
A process mapping exercise was carried out for callers who had contacted Morriston A&E Department by telephone and had their call transferred to NHSDW. This highlighted several blockages which needed to be addressed in order to improve the patients’ journey. A questionnaire was sent out to a sample of callers who had contacted Morriston A&E department and had their call transferred to NHSDW. In addition six patients were interviewed, their stories audio-taped and then a mind map produced.

Two common themes emerged from both the stories and the questionnaires:

- Callers did not know where they were being transferred to NHSDW and why
- Callers felt that they had to wait for their call to be answered

As a result of this feedback and the process mapping exercise the service has been improved in the following ways:

- All A&E Departments involved in an integration with NHSDW have been provided with laminated ‘prompt cards’ reminding staff to inform the caller why they are being transferred
- All staff call handling outline the service provided by NHSDW to the caller
- All staff within NHSDW inform the callers how long they can expect before they are called back
- NHSDW switchboard was reconfigured to allow calls from an integrated A&E Department to be answered with a higher priority than normal calls

1.2.4 Direct Referrals

Direct Admission to Medical Admissions Unit – Royal Gwent Hospital
It is often clear after a caller has had a full assessment with a nurse adviser using the computer assisted software, that they will need further management in a hospital setting. Current protocols dictate that these callers are sent to the A&E department. NHSDW has been involved with the WECAC group in the Royal Gwent Hospital to explore the possibility of referring patients directly to their medical assessment unit. The group has discussed which patients would be suitable for this project and have agreed to include those that NHSDW have admission protocols for with Gwynedd and Anglesey out of hours GP service. These protocols include – collapse, chest pain, haematemesis and epileptic fit. It is hoped that the work currently underway with the ambulance service regarding NHSDW access to urgent ambulance transport will help address current transport issues. This work remains ongoing with the Gwent Call Centre team.
1.2.5 Emergency Networks
In order to sustain the links made via the WECAC, NHSDW are represented on the following Emergency Care Networks locally, regionally and nationally - Swansea Emergency Care Network Group, Carmarthenshire Emergency Care Group and Steering Board and also the Welsh Ambulance Innovations in Care Committee.

1. 3 Action Plan / Future Work
- Work continues with the Accident and Emergency Departments across Wales to provide a nurse triage and assessment service
- NHS Direct Wales continues to work in collaboration with the Welsh Ambulance Service to ensure work in progress is completed and to explore further initiatives which would improve the patient’s journey
- NHS Direct Wales continues to engage with the Chronic Disease Management Team in Swansea LHB and the Early Response Team in Bro Morgannwg
- Links are maintained between NHS Direct Wales and Powys Minor Injury Units
- To help NHSDW fulfil its Patient and Public Involvement and Clinical Governance Agenda

1.4 Local Evaluation
Involvement for NHSDW in the WECAC has been extremely worthwhile. Sustainable links have been made with all the health care communities involved in the WECAC programme and NHSDW has been able to support the emergency services to make significant service improvements. The links within Primary Care remain ongoing and there are real opportunities for NHSDW to contribute towards Chronic Disease Management and admissions prevention. The objectives for the organisation and the WECAC work programme have in the main been achieved.

2. PERFORMANCE

2.1 Key Performance Indicators
National measures were not applicable to NHS Direct Wales therefore the local situation gave direction to the work undertaken during the Collaborative.

2.1.1 KP1 3: Self Assessment Score
The emergency care network score was consistently reported until February 2005, a step improvement was seen in November 2004 from 0.5 to 2, with a gradual increase to 3.5 to February 2005.
2.2 PDSA Cycle Register

PDSA register reported monthly by NHSDW were as follows:

- Primary Care: 80%
- Emergency Department: 20%
- Acute Assessment: 20%
- Information and Data: 1%
- Patient Pathway / Flow: 7%
- Miscellaneous: 4%
- Culture Change: 1%

NHSDW reported a total of 20 PDSA Cycles undertaken during Phase 1 of the Collaborative.
1. Final Report

1.1 Introduction
This report provides a summary of the work completed within the North East Wales Health and Social Community and outline the structures set in place to both direct and carry out the work identified under the three work streams outlined in the Collaborative, including management structures to ensure sustainability.

1.2 Work Streams

1.2.1 Primary and Social Care Team
Much of the focus of this team was on reviewing the demand for unscheduled and emergency care within the health and social community in North East Wales. This included analysis of the referral patterns for admission by GP Practices in the area and the patterns of admission/readmission for particular cohorts of patients representing major disease groups. Similarly attendance patterns at the Emergency Department were reviewed. Practices with atypical patterns of referral were identified and work is ongoing within Flintshire and Wrexham LHBs to identify causes.

An audit of patient perception of the need for attendance at Emergency Department was conducted in early March 2006, to be followed up by a joint assessment of “appropriateness” of attendance to be carried out by the Clinical Lead of the Primary and Social Care group and the Clinical Lead of the Emergency Department in order to assess the number of attendances at NEWT Emergency Department that are Primary Care cases.

1.2.2 Emergency Department Team
The primary objective of the Emergency department team was to improve the patient experience of the department, both in terms of clinical effectiveness and waiting times. Physical space and layout within the department were identified as significant issues. A detailed analysis of patient attendances, breaches and flows within the department was carried out in November 2004, analysing all patients attending the department in that month. This demonstrated the days of the week with highest attendance levels were Monday and Sunday. Sunday represented a particular issue as staffing levels in the Department and throughout the Trust were typically reduced to weekend levels and therefore not best able to cope with high volume demand.

Additional space was created by moving offices to temporary buildings thus allowing additional clinical space in this area to be used primarily for treating minor injuries subject to staffing.

A fracture neck of femur care pathway for use within the Emergency Department was developed. A number of PDSA cycles were run to ensure that this pathway was effective and easy to use for staff. The final pathway has now been incorporated as part of the Department’s standard documentation. Work has continued to develop the pathway through admission, theatres and to discharge form the acute Trust, by a larger, multidisciplinary team.

Subsequent to a review of appropriateness of admission carried out within the Acute Assessment team a pilot study for chest pain assessment was initiated within the Emergency Department. A multidisciplinary task and finish group from the Emergency...
Department, Cardiology Services and Modernisation Department was set up to develop a protocol for assessing patients presenting with chest pain. Patients with one or more risk factors for myocardial infarction were to be admitted as standard procedure. Patients not possessing risk factors were subjected to the protocol.

1.2.3 Acute Assessment Team
Data gained from focusing on the first 48 hours of a patient's journey through the hospital led to an evaluation of the appropriateness of admission to both the general Medical admission wards and the cardiac/chest pain admission ward. This demonstrated that a significant proportion of patients were being admitted largely due to the lack of services on a 24/7 basis, particularly community-based services and diagnostics. Limited urgent access to clinics and to services in the community on a 24/7 basis was also identified as a factor that contributed to the high level of inappropriate admissions. An ongoing pilot study within the Emergency Department has been undertaken to assess patients presenting with chest pain for Acute Myocardial Infarction, at the time of writing this report over 50% of patients assessed under the pilot had been successfully discharged from the Emergency Department.

Patients showing adverse reactions to the exercise tolerance test (ETT) would be discharged to Primary care for follow up or offered access to Cardiology clinic if appropriate. To date 34 patients have been tested under the pilot, with 20 being successfully discharged from the Emergency Department. These patients would previously have been admitted. An unforeseen benefit of the protocol has been that a small number of patients had been identified as low risk initially but either showed an increase in marker levels on the seen panel, or had a positive result from the ETT and were subsequently identified as having had an acute cardiac event - these patients were admitted and in two cases went on to have urgent angiography and angioplasty. The pilot will continue at present on a 9:00-5:00 5 day week basis but the scope of the protocol widened to extend the hours of availability of the service.

Mapping of the patient journey indicated that access to diagnostics, particularly imaging was a bottleneck, delaying the determination of the treatment plan for patients. An audit of the times taken from patient arrival on the admission ward request to investigation indicated that two points were contributing to the delay. In the case of pathology requests there was often a delay in the request being made by the on-call doctor. For imaging requests the main delay was from the request being received by imaging and the patient being called for the investigation. Further investigation has indicated that the major cause of this delay was the use of limited availability of staff to escort patients to the imaging department.

1.3 Issues and Opportunities
The major bottlenecks in the pathway for patients presenting with fractured neck of femur were identified as time to X-ray and wait for specialist opinion. Availability of X-ray remains an issue but is intended to be addressed within the Trust's development strategy.

1.4 Action Plan / Future Work
Issues highlighted being:

(i) Availability of support services within the Trust on a 24/7 basis
(ii) Remote location of admissions wards from Emergency Department and Radiology department

(iii) Admissions to acute beds for assessment, including urgent diagnostic investigations

These issues will be addressed within the strategic plans that are currently being developed both within the acute trust and the broader community. Within North East Wales NHS Trust the needs of unscheduled care will be addressed by the North East Wales Emergency Response Area (NEW ERA) project. This project will look to redevelop the emergency flows within the Trust with particular focus on access. A project steering board has been created to direct the work of NEW ERA and to develop an action plan for implementation of the strategy.

The operational performance of the emergency stream will continue to be monitored and directed by the WECAC steering board, retaining the same membership and operating as the Emergency Network for North East Wales. It is envisaged that the function of the Primary and Social Work group will be fulfilled by the LHB lead Long term Conditions team. The Acute Assessment and Emergency Department Teams will continue to carry out development work as directed by the Emergency network and/or the NEW ERA project board. In this way the learning from WECAC will be carried forward by the same teams into the ongoing development of unscheduled care in North East Wales.

1.5 Local Evaluation

Within North East Wales there existed an extremely good relationship between all partners within the health and social community which predated the advent of WECAC. This relationship allowed the evolution of the existing Emergency Pressures group to become the steering board for WECAC in the area. The formalised approach for analysing performance and the use of PDSA methodology where appropriate allowed changes to be piloted on a small scale prior to implementation.

Within the Emergency Department there was limited scope for development of new ways of working, largely due to physical space constraints and the layout of the department itself. However, the piloting of minors streaming, implementation of a care pathway for fractured neck of femur and the creation of additional, though limited space did prove to have a positive impact on performance when sufficient staffing was available.

The diagnostic and analytical work carried out during the Collaborative has provided data that has informed the development of strategic plans both within the acute trust and across the broader health and social community. It is envisaged that these strategic developments should meet the developing future needs for unscheduled care within North East Wales.

2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target

North East Wales baseline average performance against the four hour target was 96.4% and would normally be between 93 & 100% every week with an average week to week change of 1.3% ranging between 0 & 4.5%.
2.1.2 KPI 2: Thrombolysis Target
North East Wales consistently reported the Thrombolysis figures, but these have shown no statistically significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen one change starting at 3 in October 2004 with a step increase to 4 in February 2005, which has been maintained.

2.1.4 KPI 4: Fracture Neck of Femur
North East Wales consistently reported the Fracture Neck of Femur figures. These have shown no real change throughout the collaborative, except 4a (Page 21) which indicates a step improvement.
2.2 Local Measures
North East Wales reported local measures in all work streams. Although the local measures were regularly reported, only one showed a significant change.

<table>
<thead>
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</tr>
<tr>
<td>Acute Assessment</td>
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A significant change was seen in the following:
- To reduce the number of emergency admissions by 5% by March 2006 (total)

2.3 PDSA Cycle Registers
PDSA register was reported monthly by North East Wales:

![Figure 3: PDSA Cycles by Workstream](image)

![Figure 4: Number of PDSA Cycles by area](image)

In total 24 PDSA Cycles were reported during the programme.
1. FINAL REPORT

1.1 Introduction

Many staff from different parts of the Trust and from other agencies have worked together through the project to develop and test changes which will improve the experience of patients who need to access our services. As a result, performance against the 95% target has significantly improved. Performance was discussed at every Trust and Executive Board meeting. However, the Trust is not complacent and recognises that further work is required both to improve and sustain performance so that we consistently achieve above 95%.

1.2 Work Streams

1.2.1 Primary Care

The group is attended by service providers in the primary and secondary sectors and includes a range of professions. Expected outcome measures were:

- Reduction in delayed transfers of care
- Reduction in number of emergency admissions

Achievements of this team have included:

- Integration of Out of Hours Services with Accident and Emergency Departments - A formal cross-referral protocol between A&E and Primary Care Out of Hours centres (based in the A&E Department at PCH) has been agreed with the Local Health Board and will be developed further in 2006. This has contributed to a halving in the number of blue category patients who breach the 4 hour wait out of hours (Blue category = lowest priority, could have been dealt with in primary care)

- Creating seamless boundaries with NHS Direct - A&E receptionists direct all telephone enquiries regarding new clinical conditions to NHS Direct, thus releasing time for nursing staff within the department.

- Data analysis undertaken in terms of numbers of patients attending A&E in ‘blue’ category by GP practice and by diagnosis, to be utilised further in discussion with the LHBs.

Impact on performance:

Delayed transfers of Care - July 05 to March 2006

During the two year period the Discharge Liaison Team has been developed and processes adopted to ensure accurate reporting and actions for delayed transfers of care. During 2005/06 the Trust performed well and met the target for a reduction in delays by March 2006.

1.2.2 Accident and Emergency

Processing mapping events were held focusing the team’s efforts on work processes where there was scope for improvement. Weekly interrogation of the Trust’s Accident...
and Emergency Department database provided valuable information that supplemented the process mapping work and subsequently formed the basis of breach analysis reports. It was this diagnostic work that informed and directed the change programme to secure improvement. In particular the breach analysis provided a robust means of identifying the causes for delays in the department. The team agreed actions to be taken against each cause of delay to secure improvement in patient flow through the A&E department. In addition to the 95% target for A&E, the team also agreed local indicators to monitor:

- The percentage of A&E attendances seen, treated and discharged by Emergency Nurse Practitioners
- The number of A&E breaches due to waits for an A&E doctor
- The average waiting time for all patients attending the department

The team has secured progress in reducing patient journey times, improving processes and introducing modernisation initiatives, through a series of PDSAs and JDIs (Just Do Its). The changes, improvements and initiatives made by this team are listed below.

- Providing dedicated Accident and Emergency department portering services
- Securing direct electronic links with pathology services
- Strengthening the role of the ENP
- Nurse Led minor injuries services
- Implementation of alertmedia system in conjunction with Welsh Ambulance Trust
- Navigator roles monitor and expedite patient journeys accordingly
- Review of senior nursing staff structure
- Review of and changes to medical staffing rotas to reflect demand patterns
- Strengthening and embedding with supporting protocol internal A&E escalation procedures
- Ring fencing minors and resuscitation capacity in A&E
- Strengthening of communication links between A&E, MAU and Bed Managers through daily bed meetings
- Increased medical staffing by using locum costs to fund a further SHO.
- Implementation of telehealth in Minor Injuries department to support ENP's
- Using Minor Injury units to assist with Ambulance patients
- Agreement from the Royal College to appoint two Specialist Registrars in 2006
Impact on performance:
■ A net reduction in the number of minor injury patients breaching the 4 hour target in A&E over the 2 year period.
■ The amount of time spent on ENP duties has doubled per shift since the introduction of a range of actions including: NHS Direct taking calls from the A&E reception; a dedicated nurse for dealing with patients awaiting a bed closer links between A&E and MAU through bed meetings and improved access to the A&E system for bed management.
■ The number of complaints relating to waiting times has reduced.
■ Staff morale and working conditions have improved.

1.2.3 Acute Assessment Team
This team aimed to provide a high standard of care in the shortest possible time for all emergency and acute admissions to the Trust through:
■ Development of the Acute Physician model
■ Further developing direct admission/assessment units
■ Ensuring patients are discharged into a safe environment at the earliest opportunity.
■ Developing services to care for patients with chronic diseases to provide an alternative to hospital admission
■ Managing patient flows more effectively

The team decided to monitor outcomes as follows:
■ To reduce the number of A&E 4 hour breaches due to wait for specialist review
■ To reduce the number of A&E 4 hour breaches due to wait for diagnostic results
■ To increase the percentage of patients discharged from MAU within 24 hours
■ To reduce the number of A&E 4 hour breaches due to wait for a bed
■ Improve communications between site managers’ wards and departments.

The actions that have resulted in demonstrable improvement and are now embedded throughout the Trust are listed below.
■ Review of bed management and escalation policies including strengthening of communication, leading to a new policy and set of protocols being adopted in the Trust in July 2005.
■ Introduction and increased usage of discharge lounge facilities and transit nurses to promote early acute bed availability
■ Reduce delays for specialist reviews in A&E by basing the on-call SHO in A&E
Urgent Troponin I blood test turn around times reduced to support early discharges.

Improved access to Community Hospitals and Intermediate care

Expected date of discharge piloted on some wards with full implementation to commence in July 06

Impact on performance:
The introduction of the Acute Physician has shown a 10% increase in discharges within 24 hours since its introduction at the start of the Collaborative. The new allocation system of patients in line with the new Acute Physician model has commenced and although this is still in its early phase it is hoped that improvements will be made and further decrease the average length of stay on the medical wards.

1.4 Action Plan / Future Work
The Trust is committed to continuing to see improvements in performance and will therefore continue to use many of the structures and processes adopted through the formal WECAC project. Outlined below are the Trust’s current action plans in relation to the A&E target:

Management structures and networks: the structures will be maintained, with clear internal accountability structures in place for development and monitoring of action plans. In addition, the Trust will continue to be a key partner in the local Emergency Pressures partnership. This group includes representatives from the Trust, Merthyr and RCT LHBs and Merthyr and RCT Local Authorities. The group has recently reviewed and strengthened its terms of reference and is now the health community group responsible for the monitoring and achievement of the A&E, emergency admissions and DToCs targets.

Use of information: the Trust, as part of its action plan, is committed to increasing the use of information and data analysis to inform the development of action plans. Plans include:

- Daily and weekly breach analysis to be undertaken, with numbers of breaches in each category presented to each Directorate to assist them in understanding performance against their specific objectives and targets;

- Clinical incident forms initiated for all waits over 12 hours to ensure lessons learnt and changes made to the system;

- Further analysis and use of information related to expected numbers of admissions and discharges

1.5 Local Evaluation
Participation in the Welsh Emergency Care Access Collaborative has been a valuable experience that has emphasised that multi-disciplinary collaboration is a crucial factor in securing successful change. Full implementation of all the changes in both primary and secondary care settings to provide fast responsive emergency care services will take time. We are confident that in North Glamorgan NHS Trust we, with our partners, have made, and will continue to make, significant progress in improving the services we provide and improving the health of the population.
2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
North Glamorgan baseline performance against the 4 hour target was 85.7% and could vary between 85% and 97%. Average weekly variation was 4% but could be as high as 13%. Over the collaborative North Glamorgan saw a significant increase of 5.4% to 91.1%.

Figure 1: An Individuals Moving Range SPC chart showing the weekly North Glamorgan Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.

2.1.2 KPI 2: Thrombolysis Target
North Glamorgan consistently reported the Thrombolysis figures, but has shown no statistically significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen two changes initially increasing to 3 in November 2004 then a gradual increase up to 4 in May 2005.
2.1.4 KPI 4: Fracture Neck of Femur
North Glamorgan consistently reported the Fracture Neck of Femur data but has shown no significant change, although 3a (Page 21) shows a potential improvement.

2.2 Local Measures
North Glamorgan did not report local measures.

2.3 PDSA Cycle Registers
PDSA register was reported monthly by North Glamorgan:

In total 40 PDSA Cycles were reported during the programme.
1. FINAL REPORT

1.1 Introduction
North West Wales health community joined the project mid March 2005 and focused on national measures.

1.2 Work streams
Local measures were not seen as appropriate due to the short time scale available to deliver outcomes for the project. For the period of March to June 2005 data was collected from the Patient Information Management System (PIMS), which enabled the analysis of all “over 4 hr breaches”.

- Monitoring the progress of the patients through the department was completed through Process Mapping and progress chasing. This allowed real time analysis of the patient’s progress that was not available on PIMS

- The data collected was then analysed to identify trends, bottlenecks and capacity and demand problems

- Changes to working practices were commenced using Plan Do Study Act (PDSA) cycles, which were then reviewed for their effectiveness in reducing the transit times of patients or the improvement in the quality of care

- ‘Just Do It’ (JDI) actions were also used to initiate quick and simple changes

- All changes proposed were risk assessed in relation to the impact they may have on other practices or services

1.3 Issues and Opportunities

1.3.1 Accident and Emergency

- The number of patients seen in the department continues to rise annually. In 1999 and 2004 there were 20,000 and 40,000 respectively

- Weekends and Mondays are generally consistent as the busiest days.

- The times patients attend A&E are consistent. Capacity and Demand patterns are therefore predictable

- Having daily breach meetings has enabled close scrutiny of the reasons patients breach the 4 hr target. A small proportion of the breaches can be excluded (10%) daily due to data input problems. (1% increase in monthly target)

- A high percentage of patients admitted to Beuno (trauma) ward, Ysbyty Gwynedd breach the 4 hr target. Beds are normally available and the breakdown of the breaches are attributed to waiting for specialist opinion, delay in referring to Orthopaedics and X-ray delay. (27% of all trolley waits in June)
When there is an influx of the higher category patients (yellow, orange or red using Manchester triage) in the A&E department there is a delay in the transit of the minor category (green) patients. This brings a 50% increase in patients breaching the 4 hr target.

There is a reduction in breaches when there is streaming in the department. Streaming separates the minor patients from the more urgent cases and they are dealt with by a dedicated team - this maintains the flow through the department of all categories. (1% improvement in the monthly target)

The Emergency Nurse Practitioners reduce the length of stay in A&E for the minor category patients.

There is a deficit in the re-amended number of A&E senior graded posts. The calculations below were based on the British Association of Emergency Medicine (BAEM) guidelines:

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Actual</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Consultants</td>
<td>2.2 Consultants</td>
<td>-1.8</td>
</tr>
<tr>
<td>5 Staff Grade</td>
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<td>0</td>
</tr>
<tr>
<td>7 SHO</td>
<td>6 SHO</td>
<td>-1</td>
</tr>
</tbody>
</table>

The use of the Orthopaedic out patient’s facility at weekends to stream the minor patients gives the department the physical capacity to deal with the demand and there is a reduction in the number of breaches. Capacity in the department is limited for all category patients. (14 patient spaces)

There is a high incidence of breaches between the hours of 03.00 and 09.00. Requests for various, sometimes unnecessary, tests from the referred team can delay the patient’s transit.

It is not possible to assess the inappropriate patients attending A&E by looking at the blue category patients. Some inappropriate attendees are categorised as yellows or above. There are 1,500 inappropriate patients out of 40,000 attendees.

There is a high re-attendance rate to the A&E clinic in Llandudno General Hospital.

Separating Llandudno A&E four hour target from Ysbyty Gwynedd (which was averaged) in March 2005 immediately reduced the overall performance. But good progress has been made to improve compliance with the target.

1.3.2 Diagnostics

Streaming in A&E increases the flow of patients to X-ray, this in turn shifts the bottleneck and delays still occur. However having a dedicated X-ray room for minors and urgent cases has shown that the flow can be maintained. This is demonstrated by the 1% reduction in breaches.
Reduced cover over lunchtime in the A&E X-ray department has caused delays in the flow of patients.

The number of available radiographers at weekends and evenings has not been sufficient to cope with the demands placed upon the department (2 in the evening and 3 at weekends). As well as covering A&E they provide emergency cover for surgical, medical and emergency theatres.

Using the time on the X-ray database does not give us correct transit times to and from A&E and X-ray.

Nurse prioritisation of X-ray requests reduces the number of breaches.

Using the blood chute at the weekends and out of hours has improved the speed of blood results returning to the A&E department.

There are delays in receiving blood results. Certain tests like D-dimer and Troponin T cause most delays.

Certain specialities are requesting non-urgent bloods to be taken before they see the patient in A&E.

1.3.3 Acute Assessment

The number of trolley waits attributed to delays in availability of beds on the Acute Assessment Unit are lower than previously predicted. (32% in June 05).

It is not possible to get a live bed state due to data inputting problems. It relies heavily on verbal information and hand written data on the Medical Assessment unit.

Daily breach meetings have improved the communication channels between various disciplines of staff.

The 7-day flow analysis on Tryfan ward has demonstrated some capacity and demand problems.

A seven-day medical ward flow analysis has been completed.

1.3.4 Primary Care

Some referrals through LlGH A&E OOH (Morfa Doc) were inappropriate attendees. 8 out of 12 patients. (JDI with Conwy WECAC project team)

Medical admissions through A&E Increase OOH. Data collected for admissions to the MAU validate this statement. (Trust Data)

It is not possible to assess the inappropriate patient attending A&E by looking at the blue category triage category. Some inappropriate attendees are categorised as yellows or above.

1.3.5 Information Technology

The patient tracking system in A&E does not give live time status of patients within the department.
Information about the activity of A&E has been difficult to collect. Manual retrieval of data has been necessary to collect information that is hand written on the A&E cards.

1.4 Local Evaluation
Although engagement from this Trust in the Collaborative was delayed, an initial catch up demonstrated that staff could come together quickly to work towards achieving the aforementioned objectives.

At the time of writing this report we have achieved the 95% target for December 2005 and early January 2006 and the recent Statistical Process Control chart demonstrates some sustainable change.

Some operational changes have occurred in many departments, which reflect our recent performance in the 4hr SaFF target. However the minor changes made in some departments will not sustain long-term compliance.

The time scale limited what could be done in this Collaborative and indeed drove the project to be very A&E and MAU focused; it is now necessary to look at all services within the Trust and health care community. This should be seen as the beginning of the bigger project and not as the end of the Welsh Emergency Care Access Collaborative.

As a larger project, the work completed so far can be seen as phase 1. This can then be extended to include two other phases over the next year.

2. PERFORMANCE
2.1 Key Performance Indicators
2.1.1 KPI 1: Four Hour Emergency Care Access Target
North West Wales baseline average performance against the four hour target was at 94.3% and would normally be between 91 & 97.7% every week with an average week to week change of 1.3% ranging between 0 & 4.1%, and would rarely drop below 90%. The community joined the Collaborative in April 2005 and has sustained its level of performance throughout. However variation has increased leading to occasions of higher performance, as shown below:
**2.1.2 KPI 2: Thrombolysis Target**
North West Wales only reported Thrombolysis figures for a short period, and there was not sufficient data to analyse whether change had occurred.

**2.1.3 KP1 3: Self Assessment Score**
The emergency care network score has seen two changes initially increasing to 3 in June 2005 then an increase to 4 in December 2005.
2.1.4 KPI 4: Fracture Neck of Femur
North West Wales reported the Fracture Neck of Femur figures, but not consistently, and therefore there is not enough data to analyse effectively.

2.2 Local Measures
No local measures undertaken due to the stage at which North West Wales joined the Collaborative.

2.3 PDSA Cycle Registers
The PDSA register was reported monthly by North West Wales:

**Figure 3: PDSA Cycles by Workstream**

In total 27 PDSA Cycles were reported during the programme.

**Figure 4: Number of PDSA Cycles by Area**
Pembrokeshire and Derwen Contact: karen.blackmore@pd-tr.wales.nhs.uk

1 FINAL REPORT
No Final Report Submitted.

2 PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Pembrokeshire & Derwen baseline performance against the 4 hour target was 96.2% and could normally be expected between 92.5% and 100%. Average weekly change was 1.5% but could be as high as 5%.

Figure 1: An Individuals Moving Range SPC chart showing the weekly Pembrokeshire and Derwen Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases

2.1.2 KPI 2: Thrombolysis Target
Pembrokeshire and Derwen consistently reported the Thrombolysis figures, but have shown no significant change through the Collaborative.

2.1.3 KP1 3: Self Assessment Score
Pembrokeshire and Derwen consistently reported the self assessment score between September 2004 and June 2005. A gradual improvement was seen between September 2004 and January 2005 from 0 to 3, then consistent reporting of 3 to June 2005.
2.1.4 KPI 4: Fracture Neck of Femur
Pembrokeshire and Derwen consistently reported the Fracture Neck of Femur figures, but have shown no significant change through the Collaborative.

2.2 Local Measures
No local measures reported by Pembrokeshire and Derwen.

2.3 PDSA Cycle Registers
No PDSA Register submitted.
1. FINAL REPORT

1.1 Introduction
Clinical support for the Collaborative was extremely positive, initially from the Physicians and as the programme was extended also Surgery and Orthopaedics. Local difficulties in engaging Primary Care support led to this work stream being dropped despite efforts by the LHB and the Programme Manager. Some Community and Primary care based services were involved in the remaining two work streams.

1.2 Work streams

1.2.1 Acute Assessment
A group working across all specialties to examine working processes identified delays and bottlenecks in the patient journey and use PDSA (plan, do, study, act) cycles to test improvement strategies. Base line data collection highlighted key areas as a focus for initial work. These included:

- Process mapping the medical admissions unit (AMU) and understanding the current service provided
- Presenting findings to relevant key personnel
- Produce action plans for change strategies
- Monitor and evaluate PDSA cycles of change
- Make recommendations for future practice resulting from evidence based trials of improvement strategies.
- Implement cost neutral changes within the necessary clinical areas, for example Troponin I testing
- Changes in working practices of “on call” Consultants
- Introduction of new Clerking document for medical admissions
- Audit Acute Surgical Emergencies and make recommendations for changes within the process, understanding the delays within the current system of working
- Focus on individual quality improvements within the AMU leading to better standards of patient care, for example Pharmacy initiatives
- Recognising the ‘whole systems’ approach to Emergency Care by following the patient pathway from admission to discharge
- Audit the bed utilisation across two wards using a multi agency team to understand the reasons our patients are in acute beds
- Dedicating the Discharge Liaison Nurse to a specified clinical area to raise the profile and focus of discharge planning
- Recognising the importance of the Ward Managers role in the efficient working and planning of ward processes
1.2.2 Accident and Emergency
The Accident and Emergency group specifically focused on work within the Department and the impact Primary and Community service has on the Department. The focus was also around process review and examining different ways of working. The seven day analysis tool provided the Trust with the information needed to identify peak activity times and work streams. Examine breach analysis in patient groups and plan future actions around the information gathered. The key areas identified were:

- Minor injury streaming and management
- GP expected patients waiting for admission (picked up by acute assessment stream)
- Fractured neck of femur pathway. Initiating data collection and producing written guidelines for managing the patient presenting with a possible Fractured Neck of Femur.
- Examining potential for fast tracking patients through to admission
- Review clinics within the Royal Glamorgan
- Audit of the impact the new GP contract has on A&E
- Audit of Minor injury demand on the Department over a 24 hour period
- Trial of Medical Nurse Practitioner in the A&E Department, providing early assessment for GP referred patients

1.3 Local Evaluation
The WECAC programme gave the opportunity to fully understand the process of assessment, admission and discharge by mapping out each step in the patient journey. The information was used to identify delays and bottlenecks in the current system of care and redesign the process resulting in a seamless service for the patient. Data collection proved to be the driver for change. An evidence base is vital when engaging staff in the process of change. The ability to present information to specific specialties in an accurate and understandable format underpinned the success of the Programme. PDSA cycles of improvement were used throughout the life of the programme, enabling change to be successfully built upon in a manageable way. Many of the process redesign PDSAs were cost neutral; however some were funded for a short period to prove the effectiveness and efficiency of an improved service.

1.4 Action Plan / Future Work
The WECAC Programme within the Trust has been a successful time limited programme which offered the ability to examine the processes within the service and change some working practices in order to improve patient care. The future of health care will be in line with the Designed for Life document and clearly work has to be carried out to achieve the objectives set out within this document. The WECAC sustainability report outlines the Trusts commitment to the future of Emergency Care. The service will continue to be project managed. It must be recognised that to have an efficient service the Elective planning and Emergency care streams must work together to ensure effective bed utilisation is achieved. Through WECAC it has been recognised that there are numerous areas to focus on in the planning of Emergency
Care, both in the short and long term. The importance of cross Directorate working cannot be overstated. For example, it is essential to involve the Pharmacy Department when identifying areas for improvement in the Admission and Discharge process as they play a pivotal role in safe practices and quality, when changing the model of working. The use of Information Technology in future developments particularly around the implementation of Expected Date of Discharge is essential. To change the current patient flow model and introduce a process whereby the patient and staff are aware of the discharge date would need IT support to succeed. The Trust has established an Emergency Care Model Group to strategically plan the way forward for emergency care across all specialties. This group has high level Clinical input and will also address some of the key areas of work in line with the North Bro Taf redesign model.

2. PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Pontypridd & Rhondda’s baseline average performance against the four hour target was above 95% and would normally be between 93 & 100% every week with an average week to week change of 1.2% ranging between 0 & 3%.

Figure 1: An Individuals Moving Range SPC chart showing the weekly all Pontypridd & Rhondda Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.

2.1.2 KPI 2: Thrombolysis Target
Pontypridd & Rhondda consistently reported the Thrombolysis figures, but have shown no statistically significant change through the Collaborative. Although in recent months there has been an increase in variation, but the numbers of patients thrombolysed are low.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen two distinct levels at 2.5 then a step change to 3.5 in June 2005.
2.1.4 KPI 4: Fracture Neck of Femur
Pontypridd & Rhondda consistently reported the Fracture Neck of Femur figures, but only measures 4a to 4e. Only 4e (Page 21) indicates a step improvement.

2.2 Local Measures
No local measures agreed or reported.

2.3 PDSA Cycle Registers
PDSA register was reported monthly by Pontypridd and Rhondda reflecting the following:

In total 19 PDSA Cycles were reported during the programme.
1. FINAL REPORT

1.1 Introduction
The Programme Manager reported monthly to the Modernisation Project Board which in turn reported to the Executive Management Team of the LHB via the Head of Modernisation. The local team comprised the 3 team leaders in post and the Programme Manager. This team also met monthly to review progress on action plans.

1.2 Work streams
Prior to deciding WECAC work-stream targets, a baseline assessment of the Minor Injury Units was undertaken.

The findings of the Minor Injury assessment showed evidence of

- fragmented service provision
- a vacancy rate of 50%
- the need for policy, protocol, and guideline development
- a lack of leadership
- silo working
- poor communication
- no team development or vision
- manual data collection systems

The organisational priority at this stage was to stabilise minor emergency care services and a number of urgent actions were undertaken.

Organisational priorities required that:

- vacancies were filled
- staff morale raised
- team development and engagement
- leadership and visioning
- standardisation of service provision across all sites

A year after the programme had started and as each of the above activities came about, it became possible to identify measurable areas for improvement.

The 3 areas identified as areas for improvement were:

1.2.1 Create robust MIU services
- This was measured by increasing opening time of all units across Powys to 80%
- Increase % of ward nurses trained to level 1 competency to 69% by the end of the programme
Create and make operational the 999 ambulance protocol
(This protocol allows paramedics to divert 999 calls to MIUs where this is appropriate, thereby improving MIU activity and reducing ambulance time on the road as well as reducing pressure on DGHs)

1.2.2 Improve patient flow through MIU
■ Develop a range of PGDs, to provide a one stop, rapid, appropriate service for patients delivered by nurses
■ Develop nurse referral to X-ray at Ystradgynlais
■ Increase number of patients able to benefit from 24hr ambulatory ECG by providing service locally at Machynlleth thereby negating the need for patients to travel to Shrewsbury Hospital

1.2.3 Community improvements to discharge and prevention of admission
■ Create chronic disease registers to identify patients most at risk of requiring emergency admission
■ Monitor DLN input to discharge planning
■ Identify reasons for delayed discharge from DGHs

1.2.4 Achievements
■ An active and rigorous recruitment process resulted in most posts being filled (90%)
■ Improvements were made in MIU opening times
■ Monthly team meetings, clinical supervision, action planning and work allocation led to a focussed, engaged team
■ Manual collection of data from all sites, analysed by WECAC analyst with recommendations for service re-design made to EMT
■ 69% of all ward nurses working in MIUs now trained to level 1.
■ MIP, patient information system implemented
■ PGDs implemented and others under development
■ Nurse referral to x-ray implemented
■ Number of patients benefiting from local 24hr ECG monitoring increased by 100%
■ Ambulance protocol implemented
■ Chronic disease registers created and Chronic Disease management nurse recruited
■ DLN service disbanded
■ Reasons for delayed discharge identified
1.3 Issues and opportunities

There is no doubt that the lack of local capacity delayed commencement of a targeted improvement programme, however once the team were in place a ‘snowball effect’ ensued with all the efforts of the previous year coming together and paying dividends. The very small number of staff involved meant that everyone was under pressure. These staff (lone workers) had to deliver care at their respective sites as well as carry out improvement programmes. The difficulty in recruiting a data analyst and administrator remained unresolved, resulting in WECAC having to provide much needed data analyst support. The Programme Manager had dual role responsibilities and was part time. The head of modernisation left before the end of the programme and was not replaced which meant it was difficult to get engagement at an executive level. The need to collect data manually was excessively time consuming.

Despite the difficulties described above, many positive aspects unfolded throughout the programme:

- The work of the WECAC data analyst enabled evidence based, service redesign proposals to be put to the EMT
- The programme embedded the process of looking for and testing other areas for improvement through the use of tools such as process mapping and PDSAs
- It demonstrated the power of using data as evidence to prove both the need to change and the effectiveness or otherwise of change
- It improved staff morale and gave them a clinical voice
- Skill mix meant staff could work differently
- Partnership working:
  - With ambulance trust on diverting appropriate 999 calls to MIUs
  - With DGHs on discharge planning

With ambulance trust on diverting appropriate 999 calls to MIUs
With DGHs on discharge planning

1.4 Action Plan / Future Work

The work of the programme has now been subsumed into the Unscheduled Care Project Board. This group meets monthly and is chaired by the Clinical Director. The work of this group is on wider scale and incorporates a whole systems approach that includes other services and organisations.

Activities include

- Establishing a bed bureau for Powys through working with OOH provider
- Public and patient information leaflet development
- Care pathway development
- Improvements to community pharmacy and mental health services
- Development of diagnostic and assessment centres in Powys
- Increase in the number of PGDs
- Implementation of telemedicine

1.5 Local Evaluation
The programme is seen by those who participated as a success with longed for changes occurring for example PGD implementation, nurse referral to x-ray. Clinical quality across all sites has been standardised. Staff feel they are part of a team and now have the opportunity to share good practice. Staff actively communicate with each other on a regular basis and use each other as a resource.

Participating in the WECAC programme increased staff morale and improved services to patients. The local focus engaged staff in such a way that they not only suggested improvements, they were also empowered to implement and evaluate them.

The learning and feedback provided in this way motivated and sustained staff in continuing with improvements and has proved to be an effective way of modernising services. Working in partnership created challenges on all sides. However, these challenges when viewed positively have provided opportunities to explore different approaches to managing change. Working with the WECAC programme created the impetus and lever to make change happen. Sustaining and building on these improvements as outlined above, will be the responsibility of the Unscheduled Care Project Board.

2. PERFORMANCE

2.1 Key Performance Indicators
National measures were not applicable to Powys LHB therefore the local situation gave direction to the work undertaken during the collaborative.

2.2 PDSA Cycle Registers

![Figure 1: PDSA Cycles by Workstream](image)
In total 9 PDSA Cycles were reported during the programme.
Swansea joined WECAC in September 2004 and worked to meet the targets set by the Collaborative. In May 2005 Delivery Support Unit carried out a diagnostic and made recommendations and a support structure was agreed to meet the recommendations. NLIAH formally withdrew from Swansea in June 2005 by mutual agreement by all parties, but Swansea continued to attend the Programme Managers days and Learning Networks to maintain engagement in the Collaborative on an all Wales basis.

1.2 Work Undertaken
An internal operational group was refocused on the emergency care action plan. The group was chaired by an executive Trust director and had representation from the DSU. The opening of the Medical Assessment Units on the Morriston site in July 2005 was a significant service change. The Trust continued to make improvements in both operational management and clinical streaming with greater focus being given to addressing the significant challenges at Morriston Hospital. Daily and weekly performance reporting established on both sites. Key priorities within the action plan were implemented including clinical streaming and pathways, internal escalation, and direct admission rights, for example. Some additional funding was made available to facilitate the appointment of Emergency Nurse Practitioners.

In February 2006 a new Director of Operations / Deputy CEO commenced within the Trust with lead responsibility for emergency care and performance. A specific action plan was developed for Singleton A&E department. The Trust and LHB agreed to jointly fund the ‘second doctor’ pilot at Singleton. All beds previously closed for financial savings were reopened due to overall bed pressures however, it was recognised that this was a temporary solution to allow for short-term respite. An Emergency Care Network was also established at this time.

March 2006 saw a renewed focus on delivery with greater operational focus on tackling patients who breach by less than one hour. The majority of initiatives within the action plan were completed and Trust performance improved to pre-December levels. Singleton performance reaches all time high and funding for the second doctor continues for the short /medium term.

1.3 Issues and Opportunities

1.3.1 Morriston
The Emergency Access Planning Group have addressed the majority of issues identified from the original DSU visit. Morriston performance has improved from 76% in April 05 to a consistent 90% + weekly figure however there is still variation between the working week and weekend performance. The key priorities to be addressed are:

1 Minors: improvements have been substantial and sustainable, but there are occasional blips in performance when the limited physical capacity is totally consumed with majors or trauma workload. In March 2006, agreement was reached to increase the number of middle grades under European Working Time Directive and flexibility given to utilise the resources in the short term until appointments have been made.
2 Majors not admitted: the majority of patients who require an extended period of clinical observation or decision making within A&E will continue to breach until such time that the Trust has a dedicated observation / Clinical Decision Unit facility.

3 Medicine: In February 21% of all breaches fell within the medicine category. Since that time however, MAU has opened earlier in the day, a lunchtime ward round has been instigated and nurse facilitated discharge is being piloted on a few wards. There are still delays in waits for a bed and the timings and total number of discharges both during the week and at weekends.

4 Surgery & T&O: continues to have significant breach numbers particularly at Morriston and is often in excess of those seen within the Medical Division. There is a perception of limited clinical buy-in, which leads to delays in assessment however the major cause of breach is bed availability. Increased focus on clinical engagement, escalation and direct admission rights must continue to be embedded into daily operational practice and is being led by the Director of Operations.

5 General: If the Trust can eliminate the breaches that occur between 4-5hrs, there would be an improvement of approximately 3%. This coupled with a reduced LOS and discharge planning would enable the hospital to achieve the 95% standard.

1.3.2 Singleton
Overall performance on this site has stabilised and improved since April 2005, however a sustainable position has only been achieved in recent weeks following the piloting of a second doctor within the department. The ‘true’ performance cannot be quantified at this stage due to the frequency of both medical and surgical diverts from Morriston however the change has been significant.

Daily performance has also reduced from a range of +/- 23% to approximately +/- 11% and both clinical and operational management has become far easier. Daily monitoring occurs, albeit it at a high level due to the limitations of PAS and the limited administrative, nursing and clinical cover within the department. Ultimately, the high attendance and admission figures in Singleton suggests that the limited staffing levels at both doctor and nurse level will eventually become a rate limiting step to the Trust achieving and sustaining the 95% target.

1.4 Action Plan / Future Work
The LHB have signalled their intention to develop measures to reduce activity coming to A&E but recent trends suggest a year on year increase and therefore the challenge is significant. The Unscheduled Care Collaborative will be considering proposals that will inevitably link to issues regarding emergency access to GPs, as well as use of alternative services. These plans will take time to develop and will require clinical support however we would hope to see improvements within 12 months.

There is an opportunity to increase the linkage with Out of Hours services at Singleton. This however, will need to coincide with the re-tendering of the Out of Hours contract, which is not due for 18 months, but may provide an opportunity for a different pattern of medically led services. In the short term as outlined above, the only way in which the target is likely to be met at Singleton, is through some further investment, so that the stream for the single junior doctor is changed.
1.5 Local Evaluation
Recognition should be given to the improvements that have been made internally within the Trust against the emergency care standard and overall quality of patient care. There is however, collective agreement that there are still too many breaches occurring within the 4-5 hour time bands and that with greater focus by operational and clinical staff, performance could be improved and sustained.

A strategic debate is now required as to which service model will deliver consistent emergency care and how patient flow can be diverted away from ‘front-end’ A&E services. The new Unscheduled Care Collaborative, is now structured to allow these strategic issues to be debated within the broader health and social care community and contains all the key partners to allow progress to be made.

2 PERFORMANCE

2.1 Key Performance Indicators

2.1.1 KPI 1: Four Hour Emergency Care Access Target
Swansea baseline average performance against the four hour target was 79.4% and would normally be between 72.5 & 86.2% every week with an average week to week variation of 2.5% ranging between 0 & 8.5%.

**Figure 1:** An Individuals Moving Range SPC chart showing the weekly Swansea Sitrep reported performance against the four hour target and the week on week change of the reported performance staged in phases.

2.1.2 KPI 2: Thrombolysis Target
Swansea reported the Thrombolysis figures, but have shown no statistically significant change through the Collaborative.

2.1.3 KPI 3: Self Assessment Score
The emergency care network score has seen step changes from 1 in September 2004 to 4 in July 2005, which was maintained.
2.1.4 KPI 4: Fracture Neck of Femur

Swansea consistently reported the Fracture Neck of Femur figures. These have shown no significant change through the Collaborative, except 4b & 4d (Page 21) which indicate an improvement.

2.2 Local Measures

Swansea had local measures in all work streams, although the local measures were only reported in the A & E stream and the Acute Assessment. Only one showed a significant change. Some measures had not had any data reported.

### Table 1: Local Measures

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<tr>
<td>Accident and Emergency</td>
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</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>4</td>
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A significant change was seen in the following measure:

- To reduce the time from arrival in A&E to the time patients with a #NOF are admitted to an orthopaedic ward
2.3 PDSA Cycle Registers
PDSA register was reported monthly by Swansea:

**Figure 3: PDSA Cycles by Workstream**

- Primary Care: 28%
- Emergency Department: 72%

**Figure 4: Number of PDSA Cycles by Area**

- Information and Data: 9
- Patient Pathway / Flow: 2
- Role redesign / change: 2
- Miscellaneous: 4
- See and Treat: 8

In total 25 PDSA Cycles were reported during the programme.
1 FINAL REPORT
No Final Report Submitted.

2 PERFORMANCE

2.1 Key Performance Indicators
The KPIs for the WAST were as follows:

1. Improving performance standards for Category A Calls to 60% within 8 minutes

2. Development of functional emergency care networks locally, regionally, and nationally (Trust)

3. Pre-hospital Thrombolysis - 60 minutes call to needle time for whole of Wales monthly figure

4. Improving current hospital handover/turnaround times to achieve 15 minutes

Welsh Ambulance Services NHS Trust regularly reported a number of KPIs and local measures that should impact upon the KPIs. The timeliness and completeness of reporting was very good. The data indicates that there has been no significant change in measures 1, 3 & 4, but an increase in the network score and some of the local measures has been seen.

Figure 1: An Individuals Moving Range SPC chart showing the monthly WAST reported performance against the Cat A target and the month on month change of the reported performance staged.

2.2 Self Assessment Score
The emergency care network score has a number of step changes from 1 in September 2004 to 4 in August 2005.
2.3 Local Measures
WAST regularly reported Local Measures that have links to the KPIs. Some of these measures show improvements, but have not yet impacted on the KPIs.

Table 1: Local Measures

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<thead>
<tr>
<th></th>
<th>Number Agreed</th>
<th>Number Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Accident and Emergency</td>
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<td>6</td>
</tr>
<tr>
<td>Acute Assessment</td>
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<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

2.4 PDSA Cycle Registers
PDSA register reported monthly by WAST reflected the following results:

Figure 3: PDSA Cycles by Workstream
In total 31 PDSA Cycles were reported during the programme.
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